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THE DELINQUENT CHILD.¹

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IN 1881 the *State Children's Relief Act* was passed, which established the boarding-out system of dealing with dependants as distinguished from delinquent children. The delinquents were provided for by the *Industrial and Reformatory School Act* of 1881. This Act was amended in 1896 to include the provision of boarding-out to their own parents, the children of widows and deserted wives, and these Acts were consolidated under the *State Children's Relief Act* of 1901.

In 1892 the *Children's Protection Act* was passed, for the purpose of regulating the control of chil-

dren under three years of age, boarded out privately, as distinguished from State children controlled by the *State Children's Relief Act*; for the protection of children engaged in public performances; against persons procuring children for purposes of begging and receiving alms; and for the regulation of lying-in homes.

The *Infant Protection Act* was passed in 1904 for the protection, maintenance, education and care of infants, and to provide for the inspection, supervision and the control of places established or used for their reception and care. Under this Act the Children's Courts were established for the first time, for the limited purposes of this Act.

Children's Courts, as they now operate, to deal with neglected children and juvenile offenders, were created by the *Neglected and Juvenile Offenders' Act* of 1905; and facilities were afforded for the hearing in private of cases by unmarried women who sought monetary aid from the fathers of their

¹Read at a meeting of the Section of Neurology and Psychiatry of the New South Wales Branch of the British Medical Association on August 30, 1932.

children; action might be taken before or after the birth of the child.

In 1905 the *Neglected Children and Juvenile Offenders' Act* was passed, to make better provision for the protection, control, education, maintenance and reformation of neglected and uncontrollable children and juvenile offenders. This measure repealed the whole of the *Reformatory and Industrial Schools Act* and portions of the *Children's Protection Act*, and a marked characteristic was the wide definition of the neglected child.

For years the codification of the law relating to children had been urged in the annual report of the Children's Department, and in 1925 the work was accomplished by the passing of the *Child Welfare Act*, which repealed the *State Children's Relief Act*.

The *Children's Protection Act*, the *Infant Protection Act*, and the *Neglected and Juvenile Offenders' Act*, and the law relating to children are now incorporated in the *Child Welfare Act*, under these specific sections:

(a) Boarding-out of children, which covers the dependent children of the State, cared for apart from their parents with the humanitarian position, allowing children of deserted wives and widows to remain with their parents.

(b) Institutions for the accommodation and reformation of the delinquent members of the community up to eighteen years of age.

(c) Places used for the reception of children, which include children up to seven years of age, privately boarded out apart from their parents, lying-in homes. The Act requires the keepers of such homes to furnish records and stipulates the conditions under which infants shall leave such homes.

(d) Protection of children, governing the employment of children in dangerous performances, and prohibiting the procuring of children to solicit alms.

(e) Street trading licence regulating the employment of children, twelve years and over, in street trading, which includes the hawking of newspapers, matches *et cetera*, playing or singing or performing for profit, or kindred occupations carried on in any public place.

(f) The committal of neglected or uncontrollable children or juvenile offenders. Under this section machinery is provided for the apprehension of children up to eighteen years of age, when classed as neglected or uncontrollable or juvenile offenders, or if found in a brothel or opium den, and their disposal before a Children's Court.

The procedure of the court is defined, and the court is empowered to release a child on probation on such terms and conditions and for such period of time as the court may deem fit, or to commit the child to an approved person other than the parent, or to commit the child to an institution, or to sentence the child according to law.

A novel feature of the Act is that by which a court may grant an order authorizing the adoption of a child by a person other than the parent. The effect of such order is that the child shall be deemed to be the child of the adopted parent, as if such child had been born to such adopted parent in lawful wedlock. All rights and liabilities existing between the child and his natural parents (except in relation to inheritance and property) are terminated.

The fact that physical and mental defects were contributing factors to the delinquency of children was early realized in the operation of the Children's Court, and the clinic was established at the Metropolitan Boys' Shelter, by the engagement and under the authority of the State Children's Relief Board, of Dr. Andrew Davidson, who visited for a limited period daily and examined special cases submitted to him by the authorities.

Dr. Davidson carried on this pioneer work with commendable enthusiasm and furnished information, the value of which was ultimately realized, by the work being taken over officially by the Medical Branch of the Department of Education. The Department has now deputed one of its officers to devote his whole time to this important phase of the work of reclaiming the delinquent children of the community.

The child is first of all charged before the court either by the police, Child Welfare Department, or by the parents themselves.

If the offence is a minor one, he is either admonished by the magistrate or else he is admonished and placed on probation for a period varying from six months to two years. In the more serious cases, such as theft, persistent truancy, uncontrollability, and sex misdemeanours, the delinquent is charged and remanded for a week or more to the shelter.

The shelter is in the same building as the court, so that the magistrate and court doctor are in constant and immediate touch with each other. The work is greatly facilitated by the fact that the magistrate gives due consideration to the report of the medical officer; in fact, it would be impossible to carry out the work unless there was complete harmony between the magistrate and doctor. I am glad to say that this has always existed.

During the week's detention in the shelter a physical examination of the child is made, mental tests are performed, and his mental status is assessed. There is a full investigation into the child's environment, home conditions and school life, the latter especially in the case of truants.

The parents during this period of remand are interviewed, and an account of the child's behaviour in the home circle is ascertained. The child's response to the shelter is also carefully noted.

At the end of the week a report is sent to the magistrate and also a conference is held between the magistrate and doctor as to the best course to be adopted with the child. The child now again appears before the court, when he is either placed on probation or sentenced to an institution.

In the physical examination of the child, any defects that are discovered are reported to the court, and if the delinquent is placed on probation, it is made a condition by the magistrate that these defects be immediately attended to, and the probation officer sees that this order is carried out. On the other hand, if the child is sentenced to an institution, the defects are remedied before he is sent there.

The children dealt with are from the ages of eight to eighteen years.

Connected with the Child Welfare Department there are two institutions where delinquents may be sent, namely, the farm home at Mittagong and the farm home at Gosford. The former is for boys up to fourteen years of age, the latter for boys fourteen years to eighteen years. Hitherto all boys of fourteen years and over were sent to Gosford, irrespective of physique. Under the new system, if it is found that the boy has a poor physical development, especially where poor development is combined with mental retardation, we send these lads, although over the age limit, to Mittagong, where the life is not so strenuous and where the lad may continue his scholastic career, so that in this way the hard and fast rule of an age limit is done away with.

Under the Department of Education we have the Truant School, where boys are sent for a period of not less than three months, and here too the head master of the school will accept certain special boys who have been committed for other offences than truancy—children who are dull and backward, or even high grade mentally defective children. These children receive special and individual attention.

There can be no doubt that we are greatly in need of graded institutions for our defective delinquents. We have no half-way house for these defectives between the institutions already mentioned and the mental hospital.

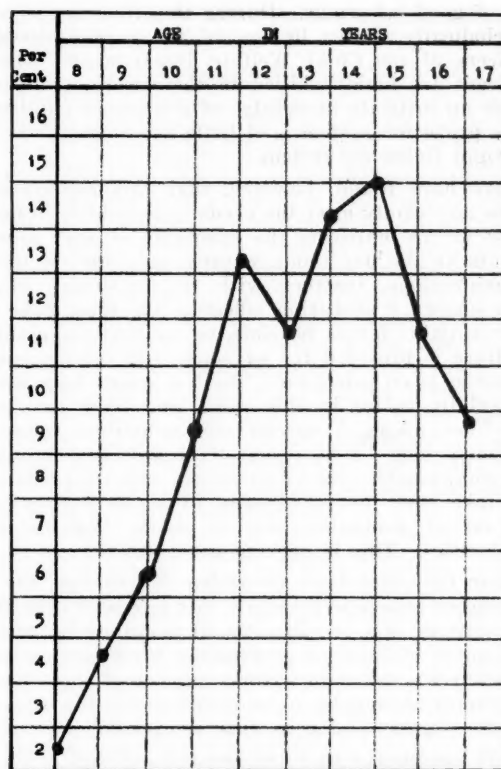
There is also a special mental survey performed upon the child. The circumstances surrounding his first delinquency are investigated, as a great number of the offenders, although charged for the first time before the court, frequently have a long history of delinquency before being discovered. This especially applies to younger children who have been presented for petty theft.

The more serious offences, such as breaking and entering, occur amongst older youths who have left school and who are now idle. In quite a number of these cases there is no history of any offence previous to puberty. The pubertal stage, between fourteen and fifteen years, is the age at which we have the highest incidence of offenders (see Graph and Table I). As I previously mentioned, the child's reaction to his environment—home conditions and school life—receives due attention.

As a rule there is little difficulty in the examination of these delinquents (except in the case of complexes). They are only too willing freely to discuss their misdeeds, and they seem to find a peculiar satisfaction, as one boy expressed it to me, "in getting it off his chest".

When they realize that a personal interest is being taken in their case and that the examiner is there to assist them, they will openly discuss their faults, even in some cases offering a solution of their own difficulties.

It is not uncommon for a boy to go so far as to suggest that he even be sent to an institution in order to get away from the crowd.



Graph showing age incidence of delinquency in 1,029 cases.

TABLE I.
Showing Offences Committed at Different Ages.
Total examined: 907 children.

Age.	Petty Theft.	Truancy.	Violence.	Suicide Attempted.	Breaking, Entering and Stealing.	Uncontrollable.	Sexual not including Masturbation.	False Pretences.	Forgery.	Assault.	Malicious Damage.	Gambling.
8 ..	5	6			3	1						
9 ..	11	15			5	9						
10 ..	18	21			10	9						
11 ..	23	21			10	9						
12 ..	50	45			20	13						
13 ..	32	34	1		23	21						
14 ..	61			1	30	20	5	12		3		
15 ..	57		6		43	24	8	1		4		
16 ..	43		3		30	17	8	3	1	1	1	1
17 ..	43		4		33	10	3	1	4	1	3	

As an instance of the appreciation these lads show to any personal interest taken in them, I correspond with some forty of these lads, and only three out of that number have ever again put in an appearance in court. These are, however, selected cases, in which the main cause of delinquency has been poor home conditions, poor environment and lack of interest from the parent.

Probation means that the child is bound over for a period, varying from six months to two years, to

be of good behaviour. During this time the boy is periodically visited by one of the paid probation officers of the Child Welfare Department. These officers are highly skilled in their work and they have an intimate knowledge of delinquent children. The probation system is of little use unless there is a rigid follow-up system.

We have found, however, that this supervision does not wholly meet the needs of the child, so that now we are enlisting the sympathy of such movements as the boy scout, church and other welfare organizations, together with the assistance of a few honorary probation officers. We thus make it our duty, as far as possible, to see that the child's welfare is provided for by some such organization when he is on probation. The boy scouts have been especially useful in this work, and scout masters are now taking a special and individual interest in these lads. I have myself organized a number of scout masters and rover scouts who are prepared to take over the supervision of a lad during his period of probation and to assist him in his difficulties. This is proving most effective.

For the older boys we endeavour to find work. Owing to economic pressure, this has been difficult. In spite of this, we have found positions for quite a number of boys. A government institution in the country has taken in quite a number of these lads, and many of them have eventually obtained positions in the country and have done remarkably well.

We are hoping that the Department may yet see its way to the appointment of a number of honorary probation officers who would work under the guidance of the paid probation officer.

I am also anxious to establish a treatment clinic for certain selected children. These clinics have proved most satisfactory in New York. The children, along with their parents, regularly attend these clinics at stated intervals, not only the magistrate, court doctor and probation officer being present, but honorary psychiatrists who are interested in the welfare of delinquent children.

During the remand to the shelter a thorough physical examination is made, special attention being paid to all chronic defects. From the parent and older child a history of past illnesses, which may have a bearing on the delinquency, is investigated, such as a history of epileptic seizures, encephalitis, chorea, tuberculosis.

Physical Defects.

Malnutrition.

On the examination of 1,174 delinquents (Table II) I have found that 18.31% (10% deficiency) were suffering from malnutrition. Of these, 6.30% were suffering from gross malnutrition (15% deficiency). It is only natural that a large percentage of these boys suffer from malnutrition, as they are in great part drawn from the lower quarters of the city. But on a comparison of these figures with malnutrition figures in schools such as Redfern, Ultimo,

and schools in similar districts, the malnutrition standard is about 10% higher amongst delinquents.

TABLE II.

Showing Incidence of Physical Defects Revealed by Medical Examination.
Total number examined: 1,174.¹

Condition.	Number.	Percentage.
Malnutrition, gross	74	6.30
Malnutrition	141	12.01
Adenoids, needing surgical treatment	61	5.19
Adenoids, not needing treatment	17	1.44
Tonsils, needing surgical treatment	85	7.24
Tonsils, not needing treatment	149	12.69
Vision, needing spectacles	114	9.71
Vision, slight defects	98	8.34
Hearing, defective	76	6.48
Speech defects	41	3.49
Nerves	150	12.77
Heart, notifiable defects	8	0.68
Heart, slight irregularities	15	1.27
Lungs, and respiratory system	18	1.53

¹ Some subjects had more than one defect.

The percentage of history of head injuries in 913 cases, including all delinquents, is 11.5.

This malnutrition is generally accompanied by a poor musculature, a lack of vigour and vitality, causing a nervous, unstable condition. This reacts in a disgust for school work or for steady employment, following upon a natural bodily weakness. The child, by reason of this weakness, is unable to concentrate on his school work, he is easily fatigued, and thence drifts into truancy. The older boy, unable to withstand the rigors of his employment and possibly unable to give satisfaction to his employer, cannot retain his situation, and, having drifted from one job to another, takes the easiest method of gaining a livelihood and becomes delinquent. Although only in a few cases have I traced malnutrition as the major factor in delinquency, it is very frequently a contributory factor.

Adenoids and Tonsils.

The prevalence of adenoids and diseased tonsils amongst delinquents is also very marked. Out of 1,174 children, 5.19% were suffering from adenoids, about 2% from nasal catarrh, nasal polypi and other nasal obstructions, 7.24% had enlarged tonsils, in many cases combined with adenoids. Here again these figures represent about double the percentage found in schools. These conditions, so often allied with malnutrition, cause weakness and discomfort, combined with a certain amount of mental retardation, and are in some cases the direct cause of truancy. I have known truant boys whose adenoids have been removed and who have received the necessary after-care, to have relinquished their truant habits, but only when the home conditions and environment have been satisfactory.

Defective hearing is also very common amongst delinquents, again showing a high percentage compared to school figures; 6.48% of my delinquent boys suffer from this debility. This defect again has an important bearing on truancy. The child, isolated to a certain extent from his fellow scholars, develops morbid tendencies and becomes introspective. The child is unable to share the full benefits of class tuition, and to the teacher he

appears to be a dullard. I have had these lads brought to me with the statement that the boy is a truant, and also that he is mentally defective.

One such lad, who appeared before me for truancy and whose teacher and parents were convinced that he was a mental defective, I found to be suffering from marked defective hearing, and a mental test revealed him to be a backward child only in virtue of this defect. The lad was placed in a special class and treatment for his hearing was provided; a complete cure resulted.

In later life these lads often become anti-social by reason of the fact that employers are unwilling to avail themselves of their services.

Chorea.

I have been remarkably struck by the incidence of chorea amongst delinquent children. Quite 7% of these boys give a history of this disease; 2% were suffering from rheumatic endocarditis, 2% had definite choreic movements, and the rest gave a very distinct history of the disease. They were all emotionally unstable, possessing lack of control to a marked degree, and in many cases they were mentally backward. Chorea, apart from physical disabilities, appears to have a very marked effect upon the moral conduct of the child, resulting in delinquent habits.

Severe and Prolonged Illness.

Severe and prolonged illness in hospital often has a marked effect, especially upon the unstable child. I have seen more than one child who has been for a long period in hospital, where either he has been the pet of the ward or else, by reason of some special infirmity, has been the subject of demonstration to students and others. From such conditions he is suddenly returned to a home where the conditions are now mean and squalid, and where he becomes a mere unit in a large family, and, deprived of the attention and the good things he has been accustomed to in hospital, he now takes to theft to compensate himself for his lost enjoyment.

Head Injuries.

The percentage of gross head injuries in my delinquents stands as high as 11.5%. The total number examined was 913 and in each case I made very careful inquiries. They all gave a history of an injury to the head, followed by concussion. Each child had been in hospital for a period varying from three days and upwards; there was always a history of unconsciousness; in nearly every case the injury occurred prior to the first delinquency. A few of these patients were examined by X rays, but no abnormality was discovered. I am inclined to the view that these gross head injuries have a bearing upon future delinquent habits, owing to their prevalence, but whether these injuries are the direct cause of the delinquency or are merely contributory factors in those who are neuropathically disposed, or whether it may be due to some lesion of the brain caused at the time of injury, I am not

prepared to state until further investigation has been made.

Defective Vision.

Defective vision was found to be 9.71% amongst delinquent children. This figure does not include actual eye strain, which is complained of by quite a number of children. I consider that defective vision is the defect above all others which causes delinquent habits in children. The child suffers from nervous headaches—the straining of the vision causes irritability and discomfort—he falls behind with his class work owing to inability to see the blackboard clearly, often gaining the censure of his teacher who is not aware of the defect. In games involving clear vision he is an utter failure, and so, disheartened, the lad drifts into truancy and thence it is an easy path to more serious delinquency. There are certain numbers of cases in my records in which, after the vision defect has been attended to and glasses have been prescribed, no further trouble has resulted.

Slight Nervous Manifestations.

Slight nervous manifestations are very common among delinquents. About 30% or more are avid nail-biters; another 10% suffer from nervous manifestations such as habit spasms, restlessness *et cetera*. These nervous manifestations are not so much the causal factor in delinquency, but are the direct results following upon delinquent habits which necessarily produce a state of high tension.

Speech defects were found in 3.49% of delinquent children. I have never found a case in which this is the direct causal factor, but it is certainly a contributory one.

A great deal has been written about the criminal type of head. I took the head measurements of 335 delinquent children, but I found no variation from the normal.

Unfortunately, and as may be expected, masturbation is rife amongst these lads and a great deal commoner amongst delinquents than amongst any other class. I am convinced that masturbation acts as a major cause in about 7% of delinquents. A moral lethargic condition is produced, there is a weakening of the will power, inability to concentrate, extreme irritability, with a development of anti-social habits. Truancy and running away are common delinquencies amongst masturbators, as also petty thieving; substitution delinquencies may also develop.

Masturbation stands out as the most important factor, possibly combined with heredity, in sex delinquencies. Among the masturbators that I have examined, the boys have admitted to a long history of masturbation, extending over some years. Many of these lads have learned their sex knowledge in the wrong school, and have never had the advice and guidance of a good parent. Our method is to enlighten these boys in sexual matters, and they pay periodical visits to the clinic. In no case has there been a single failure by this treatment.

Epilepsy.

The epileptic becomes delinquent partly through social conditions and partly due to his own innate mental tendencies. His unstable, nervous, and emotional nature renders him peculiarly prone to delinquency, and especially is this the case when these tendencies are linked up with bad home conditions and poor environment and when there is little or no restraint placed upon the boy. The refusal of the employer to engage the lad, or the constant changes due to dismissal when it is discovered that the boy is an epileptic, still further help to promote his anti-social tendencies. The offences most common to epileptic delinquents are running away, thefts, violent assaults and even sex offences. During the year 1932 I have had seven delinquent epileptics, two of whom were certified, and the rest were not certifiable. When the lad is not certifiable, if his delinquencies become too frequent, the only course open to us is to send him to one of our homes, such as that at Mittagong or Gosford. These children are more suitable for an epileptic colony than for these institutions, where there is not adequate provision for them.

I have had a certain number of delinquent boys who give a history of epilepsy in the family (either the father or the mother may be an epileptic, or some more distant relative). Although the boys themselves have shown none of the classical signs of the disease, they seem to inherit certain traits of the delinquent epileptic—they are shiftless, incapable of concentration, given to lying and thieving, and wholly unstable.

I had recently under my care a lad whose father is an epileptic, also his aunt and his grandfather suffered from epileptic seizures. The boy, who is a physically fit lad and of normal intelligence, was brought to me with a history of petty thefts from houses. These thefts were committed when he was hawking goods from door to door. The lad had no real necessity for thieving, although he excused himself on the plea that he wanted the money to pay the rent. He comes of respectable parentage. He is a quiet, docile lad, but unstable and irresponsible, and seemed to have but little realization of the gravity of his offence. I also elicited the fact that a sister of the boy was given to petty thieving in the home. The lad was originally before the court some years ago for petty thieving. I was inclined to the view, in the absence of any other cause, that this boy's delinquencies were due to the traits inherited from his epileptic forbears. The prognosis is very doubtful in these cases.

This boy has been released on parole and has joined the boy scout movement, with the hope that the outside interest, healthy outdoor exercises and the strict moral code of the movement may assist in rendering him a more stable and responsible lad.

The following is a typical case that came under my care, of a lad who was suffering from epileptic seizures, accompanied by delinquency and who was non-certifiable.

The boy first appeared before the court in 1928 as an uncontrollable child, at the age of thirteen years. His father was an epileptic. At this stage the boy gave no history of epileptic seizures. He appeared again the same year as an uncontrollable child. In both instances he was returned to his parents on probation. In 1929 he appeared for theft and was sent to a farm home, Mittagong. Again in 1930, he was returned for breach of probation,

and was sent to Gosford. While he was at that institution, he had his first epileptic seizure. He was returned from that institution for observation. During that time he had one violent seizure and was sent to the Reception House. He was later discharged from there to his parents. Since that time he appeared twice before the court, namely, in January and May of 1931, for theft, and was sent in both instances to the care of his parents. The boy is quite an intelligent lad and never showed any signs of mental deterioration. Although he was non-certifiable, he was from an early age both a social menace and a moral defective.

It is a case such as this which stresses the need for an epileptic colony, where the boy would be under supervision and control and at the same time be self-supporting.

As an instance of typical delinquency in an epileptic, combined with mental deterioration, the following will serve.

A boy, aged fourteen years, was brought before the court in 1931 an uncontrollable child. He gave a long history of epileptic fits. His intelligence quotient was seventy-five. Later, in May, 1931, he appeared for malicious damage, but was at that time sent home to his parents. In June, 1931, he again appeared. I sent him to the Reception House, where he was certified as insane, and was sent to a mental institution. I understand that he was released on parole at the request of the parents, but twice after that, in 1932, he appeared for assault on a constable and breach of probation.

This boy's entire history, from his first appearance at court, was one of violent and threatening conduct. The lad had a vicious temper when aroused, and frequently attacked the inmates of the shelter.

Delinquency following upon a history of encephalitis is not infrequent, although I have met with one case only.

This lad presented a very typical history. He contracted the disease at the age of six years, and he came before the court at the age of twelve years for theft. Two years later he was committed to an institution, where he remained for eight months. Seven months after his release he again appeared before the court for maliciously wounding, and reappeared, eight months later, as an uncontrollable child. It was at this period that he first came under my notice, and I then elicited a history from the parents, that after his illness he began to show peculiarities of conduct. Later violent fits of temper developed; on occasions he would strike his mother with a knife. This misconduct continued up to his seventh year. After that age he appeared to improve, but then began a series of senseless and petty thefts. As he grew older, these thefts became more serious.

I have found the boy, on examination, to be of normal intelligence, but irresponsible and unstable, with no moral sense. He was physically fit, except for a slightly deflected septum. I advised at that period that he should be placed in a home suitable to his condition, but as he was not certifiable, he was sent to Gosford. After returning from Gosford he again got into trouble, and is now serving a sentence of two years in gaol.

These unfortunate patients, although not certifiable, should, in my opinion, be treated as moral defectives and be under the same supervision and control as the mental defectives.

I have also had children with quite a long history of delinquency of a type similar to the above, whose parents have stated that the children have suffered from influenza and that their delinquent habits

dated from that particular illness. The nature of the illness pointed to a possible encephalitis, but the evidence was not sufficient to make a certain diagnosis justifiable.

Adolescence and Delinquency.

During adolescence many boys are charged before the court for the first time. It is well known that at this period there are very marked changes taking place in the physiological and mental life of the child. There appears a lack of control, the physical and mental energies are stultified, the child is supersensitive, he is apt to resent parental control, sex worries may appear for the first time, and it is generally at this period that the child leaves school, when fresh and entirely new experiences are presented to him. Impulsiveness and irresponsibility develop, which his lack of control is unable wholly to check.

Non-adjustment to social conditions may now alter the whole course of his career. Statistics show that the career of the habitual criminal begins at adolescence. Thus is seen the tremendous importance of a proper adjustment to social conditions at this period. This instability at adolescence is far commoner in children who come from homes where there is defective discipline, in children who have neurotic parents, and in those who have a poor hereditary history. On the other hand, we get many patients from homes where no such history is elicited. I have many such patients brought to the clinic. The usual history from the parents is that the boy has always behaved himself well up to so many months ago, that he was docile and obedient and kindly disposed to his parents and had never given any trouble, but that gradually he had become sullen, refused to obey, stayed out at nights, was rude to his parents, and had on several occasions absconded from his home, having stolen money on his departure. His ill-humour and abnormal conduct are vented on his parents alone, while his friends and acquaintances are treated to the best side of his nature. This latter statement is nearly always made by parents and has an important bearing on treatment.

Treatment.

When delinquencies have manifested themselves for the first time in adolescence, the main object is to prevent the patient from developing anti-social tendencies. A complete change of environment is one often efficacious; placed amongst strangers, the patient exercises a greater measure of self-control.

Failing this, institution treatment, to tide him over the difficult period, is the best remedy. When the unstable adolescent is showing delinquent tendencies, he needs prolonged institutional training in a stable environment, to render him fit to take his place in society. The short detention of six months, which is the limit for the first detention in an institution, is too short a period.

As a prophylactic measure, the training of the child in control, the prevention of bad associations,

the teaching of sex hygiene, and a warning to the child of the dangers and pitfalls which may beset him, is a social necessity for tiding him over this dangerous period. This is a problem which might well be considered by social workers.

The emotionally unstable child is a frequent offender and is a difficult lad to handle. Especially is this the case when the child comes from a home where one or other of the parents happens to be a neurotic. Admonitions, advice or warnings seem to have but little effect on his delinquent ways. Speedily forgetful of advice and admonitions, he is continuously seeking new avenues for mischief.

In the great majority of these cases, especially when the parent is also unstable, the only course is to remove the child from his environment, by sending him to an institution, or to place him in the care of one who is able to understand and handle these children. In these circumstances, by mild discipline and a restraining but kindly influence, the child is taught a measure of self-control and restraint.

In my examination of 1,045 delinquent boys I have found that 401, or 37.8%, had some family complex, where one or other of the parents was dead, or where there was a step-mother or step-father in the family. As may be expected, the highest percentage was found to occur when the father had died or had deserted his family. This percentage stands as high as 16.2. Here the chief trouble was found to be defective discipline and a lack of control by the mother. This becomes especially evident when the boy reaches the age of puberty, at the age when he comes to resent maternal control.

Of the 1,045 boys mentioned above, 6.8% had step-mothers and 2.2% had step-fathers.

Many delinquent habits are traceable to maltreatment by step-parents or even to the many petty annoyances to which these children are so often subjected. This especially is found to be the case when the child has step-brothers or step-sisters who receive preferential treatment. It engenders feelings of resentment in the lad, an unsettled and irritable state of mind results, and in the end some form of delinquency appears—the child may become truant, or what is even commoner, may suddenly abscond from his home, and during his absence commits some form of petty theft for which he is eventually brought before the court.

Again, the intrusion of a step-parent, when the boy is more advanced in years, is especially resented by the lad. Hitherto the boy has lived with his father, who has had a relative keeping house for him and to whom the boy may have become deeply attached. His father's re-marriage may come as a very distinct shock to the boy. His mental balance is upset, he harbours a very keen resentment, which is directed not only against his step-mother, but also against his father. No matter what efforts the step-mother may put forth as a means of conciliation, he rejects them all. He becomes sullen and uncontrollable, then suddenly, without any warning, he disappears from the home, probably taking with

him enough money for his needs, or some valued trinket belonging to his step-mother. Later, if not discovered, he may live dishonestly by his wits. This is the history of many such a lad brought to me at the courts. These children are very difficult to adjust, and in many the only solution to the problem is to remove them from the home and to place them with some relative or some friend in the country. After this action is taken, the trouble is frequently averted, unless his resentment has become too deeply rooted.

TABLE III.
Indicating the Relation of Parental Complexes, with Juvenile Delinquency.
Number of Boys Reviewed: 1,045.

Condition.	Number.	Percentage.
Father and Mother Deceased	30	2.8
Father Living, Mother Dead	58	5.5
Mother Living, Father Dead	122	11.6
Father and Mother Deserted	24	2.2
Father Deserted	49	4.6
Mother Deserted (includes two in mental hospitals)	22	2.1
Step-Father (Mother remarried)	24	2.2
Step-Mother (Father remarried)	72	6.8
Complexes Total	401	

Every child appearing before the court is subjected to some form of mental test.

It would, however, be impossible and unnecessary to perform a Binet test upon every boy who is presented for examination. A general test is first given to each boy, and if he attains a certain standard, his mental level is assessed on this general test. Below this standard a Binet test is performed. The general test works out quite accurately from an intelligence quotient of 90 and upwards, and is sufficient for our purposes.

Amongst all classes of delinquents, which include first offenders and recidivists, about 50% of these lads could hold their own in the ordinary sixth class of the public school, and about 20% of these are fit for high school work.

The recidivists or return cases (and I classify the true recidivists as those who have committed three offences or more) are of a much lower standard, only 41% of these being assessed as capable of attaining to sixth class standard and very few of high school ability. The truant class comes even lower in the mental scale, only 36.25% being assessed as having average ability. This classification included children whose only offence, as far as the court was concerned, was that of truancy. Last year a survey of those children whose appearance at court was purely that of theft (including all cases of first offenders and recidivists) showed a higher level of intelligence than any other class, slightly over 50% being average. But this was accounted for in part by the numerous cases of car thefts. Many of these boys were mechanics and of quite a high intellectual standard.

The inverse ratio holds as we go down the scale. Here we find that of boys charged with theft 4.1% and of those charged with truancy 9% were

mentally defective. The recidivist class also shows a much higher incidence of mentally defective children compared with delinquents as a whole.

TABLE IV. (RECIDIVISTS).

Percentile Table showing Percentage of Delinquency, at Different Intelligence Standards, with a Comparison of the Percentages, at levels of (A) all cases examined at the Metropolitan Shelter for Boys, during year 1930, total number 1,689; (B) recidivists of two offences; (C) recidivists of three offences, or more.

Class.	Intelligence Standard.						Total Number Examined.
	100 +	90 +	80 +	75 +	70 +	70 -	
A	52.6	15.5	17.3	4.7	3.3	6.2	1,689
B	46.4	17.3	18.6	6.2	4.2	7.1	306
C	41.4	20.7	20.1	8.1	3.9	5.7	333

TABLE V.

Showing Intelligence Quotients of 400 "Truants", charged before Court.¹

Percentage.	Intelligence Quotient.
36.25	100 +
19.5	90 +
20.25	80 +
9.0	75 +
6.0	70 +
9.0	70 -

¹ Of the above 400 children all were charged with truancy only at this court. The cases selected cover a period of some years.

Since the year 1930, forty-one children were certified and sent to mental hospitals.

In delinquent work the child which presents one of the most serious problems is the backward and dull child. Truants, as will be seen from the above figures, are largely drawn from this class.

The child, too backward at school to hold his place with the average boy, becomes disheartened. He is either ignored by his teacher or punished for his dullness. He may be the butt of the more intelligent lads, and from this state of affairs he drifts into truancy, and thence to the committal of petty thefts.

Meeting now with older companions and with those who may be mentally his superiors, he becomes their catspaw, committing thefts from which he receives no personal gain.

These children rarely stop to think or reason about the consequences of their actions. They are too dull to look ahead, but not sufficiently dull to devise simple plans for theft. Petty thefts from the markets, stealing from shops where goods are openly displayed, senseless but dangerous acts, such as placing stones on railway lines, arson, running away and sleeping out, are amongst the commoner offences of these dullards.

In later life, when the boy leaves school, he bears the hall-mark of a neglected education, and, unable to face up to the demands which in everyday existence are imposed upon his weak intellect, he drifts into the downward path, finding theft to be the easiest method of gaining a livelihood.

The dull and backward child presents difficulties in analysis, he is hard to reason with, slow to see a point, and forgetful of advice given. These boys

occupy a large place in the recidivist class. Their treatment is difficult. The younger boys of school age, whose chief offence is truancy and petty thieving, frequently respond to treatment in special schools or special classes. In these the boy is placed in a class suitable to his mentality, he works with boys who are of the same mental level as himself, and he loses the inferiority complex which he has acquired. The competitive spirit is now aroused, he is happier in his work and feels that a personal and individual interest is being taken in his progress.

The lack of facilities for such schools and classes is, however, a somewhat tragic drawback to the work. For the older boys we endeavour, if possible, to get some work which does not involve much mental effort, such as unskilled or semi-skilled labour.

I deal with two types of backward children—those who are backward in virtue of some chronic defect (defective vision *et cetera*), who have suffered from prolonged illness, preventing attendance at school, and truants who have truanted from school for divers reasons, such as dislike of their school teacher, dislike of some particular lesson, a natural love of roaming, and a host of other social and environmental conditions.

The second class are those in whom backwardness is an intrinsic defect, the boy either being the victim of heredity or of some accident of birth.

Both these classes, more or less, present the same clinical picture, but differ in their treatment.

In the former the removal of the cause is in many cases effective, unless they have already acquired the habit of truancy or theft.

The inherently dull and backward children, as I stated before, often respond satisfactorily in special schools or classes or in some institution where they receive special and individual attention.

I have no intention of entering into a discussion on mentally defective children. I should, however, like to state that I have many recidivists of a low mental standard who, in spite of institutional training or any other treatment, put in an appearance at court time after time. These lads are not certifiable within the meaning of the Act, but they are a danger to the public and a danger to themselves. They are capable, under supervision, of earning a livelihood in some unskilled or semi-skilled trade, and if placed in a colony which would be self-supporting, they would cease to be a danger and at the same time would become a productive element in the community.

Conclusion.

In conclusion, there is no single cause of delinquency. Certain factors may predominate—physical, environmental, intellectual, heredity, mental conflicts. Each in turn may be the major factor in delinquency, but this major factor is always combined with one or more of the above causes acting as minor factors.

Not all children living in a poor environment, not all those who are the victims of heredity, or those suffering from a physical disability, are necessarily delinquent, but it is the combination of a variety of minor causations linked up with the major causation that produces the moral cripple.

During the last two years our recidivists have dropped from 30% to 20%. This is not only due to the work performed in the clinic, but in a large measure to the improved magisterial methods of dealing with the boy, to the constant efforts of the probation officers, and to the kindly help which has been afforded to us by the medical fraternity, by outside organizations and private individuals.

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ENVIRONMENT AND HYSTERIA.¹

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THE object of this paper is to show that an environmental influence plays a part in the development of hysteria. It is not suggested that this influence accounts for every case; it is simply one of the many factors which vary in different individuals. It is of interest to note that in the psychoses also, environment may be extremely important in determining the type of reaction in the individual with the predisposition to the development of a mental disorder. If the soil is fertile, then the result will be rich in psychopathic material.

The term environment covers a great deal, it may refer to the home, the district or even the country, but the particular part of it with which we are here concerned is the more intimate one of the home, and especially of the parents and their influence on the growing child.

The normal child is a natural imitator; from its earliest years it tends to mimic the actions of those around it and to a large extent to model itself on those for whom it has the greatest respect, or with whom it is most in contact. In early childhood, the object of its attention is one or both parents, later it becomes the school hero. It is a well recognized fact that the school captain is surrounded by his satellites and followers who adopt his smallest mannerisms. The home ties are even greater before puberty, and during this impressionable age the domination of one parent may mould the child in such a fashion as to determine its future behaviour in adverse circumstances.

The positive element, an excess of self-assertiveness in the parent, may produce the negative reaction of self-abasement in the child.

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with a resultant dependance and lack of initiative which spell ultimate failure in life, when it is thrown on its own resources. This failure may be simply a material one, or it may be a psychological one contributing to the development of a psycho-neurosis or even such a psychosis as schizophrenia.

It is intended to show that the father plays some part in the normal development of the child, and in its ultimate adjustment to the stresses and strains of life, because the absence of his influence in the prepubertal years has been detected in such a proportion of hysterics as to suggest that this condition is more than an accidental association, particularly as it occurs in comparatively few of the other patients admitted to hospital. Only the female hysterics are here considered because of their greater numbers and also because of the fact that a more detailed history of the family situation is available; in addition they are more exposed to the effects of their environment, as relatively few leave the home at as early an age as the males do.

It seems a logical inference to make that the paternal influence is necessary to counterbalance an excess of maternal solicitude and tenderness. If the father plays little or no part in the home life, then the child is thrown entirely on the mother or her substitute, a nurse or a female relative. Should any of these be neurotic or deviate from the normal in any degree, then a dangerous influence is at work which may so mould the child's behaviour and conduct as to result in some degree of mental instability. It is not uncommon to find a child imitating the choreiform movements of its mother, or even the ungainly gait of hip disease. Why should this tendency not be extended to include modes of thought and temperament also?

Influences are constantly being exerted during the early years of development, and these may show no effect on the individual until many years have passed. This is particularly the case in the psycho-neurotic, because she may not meet with any unpleasant situation or any situation to which she is unable to make a normal adjustment until the third decade of life, and it is then that the unstable foundation of past environment imperils the whole edifice of future existence.

These influences may be internal or external, and of the former the most important are those innate tendencies, the instincts. It is only in later years that a voluntary control is exercised over them; at first parental precept and example are necessary to direct them into channels which are not antisocial or undesirable, and it is here that an external force first comes into play. If this responsibility of the parent is neglected, or for any reason is not assumed, then the elemental emotions of the child run riot and considerable psychic damage results.

The mother's part is to supply care and affection; the father's to protect and, by virtue of the authority and respect which he should inspire, to control those actions of the child which are incompatible with social requirements.

In the hysteric there is frequently a history of an unstable heredity, more common in the father, less common in the mother, and the fact that the maternal influence is frequently absent in the home, suggests that heredity is not quite so important a factor in the development of the psycho-neurosis as might be expected. Any influence it possesses is more likely to be due to suggestion than to the actual transmission of any instability from parent to child.

Myerson⁽¹⁾ noted "that 85% of female alcoholics and paretics were married and they tended to transmit to the daughter more than the son a psychosis". This suggests some intimate connexion between mother and daughter. If, in addition, the paternal factor is entirely removed before puberty, then these bonds must of necessity become even firmer. Without glorifying the male too much, it seems reasonable to conclude that the father may exert a steadying effect on the child, curbing its impulses and restraining its emotional exuberance. At any time the relationships between mother and daughter and between father and daughter are entirely different. The former is encouraged and even lauded, while the latter is often controlled by the unconscious taboo of incest and any excessive demonstrativeness is frowned upon. The mother sees in the daughter a recreation of herself, she will lavish attention on her and pamper her in an instinctive tendency to aggrandize her own *ego*. There is no reaction of revolt to this treatment on the part of the daughter, as there frequently is in the case of the father-son relationship, in which antagonism often develops as adult life approaches. This mother-daughter situation, even in normal circumstances, not uncommonly persists for many years and even after marriage, giving rise to the well-known mother-in-law jokes.

It has been said that the elevation of the mother and the relegation of the father to a minor position in the home, is a marked feature of American family life, with the result that the feminine section of the population has become rather exacting, wearing an air of cold superiority and probably being largely responsible for the waves of mob hysteria which periodically sweep that country. The reason given is that 70% of American fathers are away from home for the greater part of the day because of business and this means loss of home life and paternal influence to the girl and she has only the mother on whom to build and to model herself.

It can be seen, therefore, that the absence or loss of the father must logically result in an increasing dependence of the daughter on the mother, and if this occurs before puberty, then the effect will be correspondingly greater. Mott⁽²⁾ states that:

At puberty a new and potent source of psycho-physical energy comes into being; consequently circumstances and influences which promote or antagonize the normal evolution of pubertal development will exert a profound influence on the mind, the effects of which will leave a lasting impress upon the conduct and character of the individual.

In view of the figures which will be referred to later, it seems that one of these circumstances is

the failure of the father to take his proper place in the home life. This may be due to his death, absence from any cause, alienation of the respect and affection of the child actively by cruelty or alcoholism, or passively because of a definite mother fixation. A similar situation with regard to the mother only occurs in a relatively small percentage of cases. In our series it was present in only 15% of the total number and was frequently associated with the paternal factor at the same time, occurring alone in but 2%. If the child is illegitimate, there is also a complete absence of this factor and the child is thrown entirely upon the mother. Burt⁽³⁾ realized that such a situation as this was of great importance also in delinquency and he stated that:

Almost as difficult is the position of those homes where one or other of the parents is dead or has been separated or divorced, removing the controlling hand of the father. The mother thereupon had to work during the day and would be absent during the very hours when the child needed her vigilance at home. In other instances the child may have long been separated from the parents, living for a large portion of its early life with a foster mother, or with a relative, or in an institution away from home. Such intervals of absence have always a more or less unsettling effect and it is hard to expect any solid habits of self-discipline to develop or any steady code of right behaviour to be formed.

The maternal influence may be unduly pronounced even in those cases in which the father remains at home, but by his treatment or lack of consideration of the child, loses its affection and esteem, with the result that it comes to lean more and more on the mother whose attitude in turn may be largely coloured by the behaviour of the father to her.

No doubt the same condition arises in a certain proportion of people who never exhibit any symptoms. This may be due to a successful adjustment to circumstances or they may have been fortunate enough to escape the psychological strains to which the majority of psycho-neurotics have been subjected at a later period in life. The third possibility, of course, is that some other element is essential to the production of hysteria. The people who break down may not have had the advantages of a sheltered existence, and because of some unstable quality in their mental make-up be unable to withstand the effects of psychic traumata. Some of them certainly do succeed in reaching middle age before succumbing to their difficulties, but they have probably fought a losing battle the whole way, and even in these cases there is often a history of a milder attack earlier in life. A mother is generally more indulgent than the father and the child unconsciously appreciates this and reacts accordingly. Lowrey⁽⁴⁾ found that there was an entire absence of realization of motive and that the modification of the reaction to the stimulus depended on the individual. He suggests a behaviour equation in which individual *plus* situation equals reaction. He believed that the "child constantly experiments with the whole environment by the use of various modes of behaviour, innate or acquired, to find situations in which the behaviour is successful or in some way satisfying". If the mother is

lax, then the child will modify its conduct accordingly; there will be lack of training and guidance, rendering it ill fitted to cope with the problems which later will demand solution.

To return again to the part played by the father, let us consider the matter from the psychopathological aspect. Even if we cannot accept the teachings of Freud⁽⁵⁾ *in toto*, we must admit that there is much to be said for his theories concerning the development of the *libido* from childhood, through puberty to adolescence. He has suggested that a period occurs in the sex life of the child in which there is very close attachment between mother and daughter; this is followed later by a definite antagonism in which the child regards her as a rival for the father's affections, with the awakening of the heterosexual interest, incestuous though it may be at this time. In order to remain in accord with social restrictions, any excess of feeling for the father must be rigorously repressed. This is a normal process, but one that is attended, in many cases, by considerable mental conflict. In the case of the girl bereft of the paternal factor, there is an absence of even this controlled and directed outlet for *libido*, and she is left with an affect groping blindly for an object to which it may attach itself. One solution is the return to the earlier homosexual condition, in which the mother is the adored one, a form of infantile regression not uncommon in hysteria, which is thus a compensation for the *libido* discouraged by the absence or the attitude of the father. Some fortunate people pass through this phase in their sexual life successfully and develop normal heterosexual interests, even in the absence of the intermediate stage of father fixation, but it is interesting to note in our series, in which the father for some reason or other failed to take his normal place, that 55% of the patients remained single, while 53% of those who did marry were unhappy. The explanation offered in all cases was that the husband was responsible, because he did not understand them, was unsympathetic, harsh or alcoholic in his habits or exacting in his demands. Possibly they expected to find in him a substitute for the father, and failing to do so, sought some excuse for blaming him for the development of a condition which originated many years before. This leaves 47% of married patients who were happy and had no domestic situation which might contribute to their condition. Unfortunately, information is not available, in many of these, concerning any disparity between the ages of husband and wife. It would be interesting to know if any difference existed, as this would suggest a definite effort to replace the missing father by a husband of a somewhat similar age, resulting in a satisfactory marital state, not attained by those who married a man somewhat about their own age. In the forty cases, in which the marriage was successful, there was a difference of four years in the respective ages in nine cases; of six years in five; of eight years in one; of ten years in two; of twelve years and fifteen years in one each; of twenty years in two,

a total of twenty-one cases. A similar disparity was found in only one of the forty-four patients unhappily married and here the difference was thirteen years. This means that more than 50% of the patients married men who were from four to twenty years older, and the proportion is probably greater than this, as complete figures are not accessible.

To return to the paternal factor once again. The following figures (Table I) are those upon which is based the claim that this is a most important one, and one which has apparently been overlooked in the study of the aetiology of hysteria. The total number of patients admitted to hospital was 253.

TABLE I.

Situation Occurring before Puberty.	Number of Cases.	Percentage of Total.
(a) Father died ..	90	35.5
(b) Father away from home because of employment, certification in a mental hospital, or some similar reason.	4	1.5
(c) Father deserted family ..	14	5.5
(d) Father was deserted or divorced by mother, who took the children with her.	5	2.0
(e) Patient an illegitimate child, having never seen her father.	6	2.0
(f) Father having incestuous relations with patient.	2	1.0
(g) Father alcoholic, resulting in loss of child's respect	10	4.0
(h) Father cruel, harsh, strict or otherwise failing to gain child's affection.	17	7.0
(i) Definite mother fixation to the exclusion of father	24	9.5
(j) Patient away from home environment, reared by relatives or friends, or adopted.	17	7.0
Total ..	189	75.0

This table shows that there was an entire absence of the paternal influence before puberty was reached in 119 instances or 46.5% of the total number of cases. This includes those situations grouped under the headings of (a) to (e) inclusive. Further, there occurred alienation of this same influence [(f) to (h)] in twenty-nine cases or 12% of the total, thus making 148 cases or 58.5% in which the father failed to take his normal place in the home environment. In addition to these, we may add the twenty-four (i) or 9.5% in which a definite mother fixation occurs, with the result that the father plays little or no part in the child's life. In (j) we also find that the father is absent; but the mother too does not fulfil her obligations, in that the child is brought up by someone else; but in this case, no doubt, a suitable substitute is found to take her place, negating any tendency to ill-effects from deprivation. This brings the total to 189. This means that 75% of the female patients who exhibit the symptoms of hysteria, have lacked a normal home environment during the years before puberty, in that the father has played little or no part in it. These figures are certainly surprising and suggest that this condition is more than simply one ætiological factor, and that it is rather the most important predisposing cause in its environment. That this association between paternal loss and hysteria is not simply an accidental one is shown

by examining all the other female patients admitted to hospital, with the exception of those whose condition was due to some organic condition, such as *dementia paralytica*, epilepsy, congenital mental defect, confusional psychosis *et cetera*. A similar situation occurred in a very small percentage, as can be seen from Table II.

TABLE II.

Mental Disorder.	Paternal Influence Absent.	Total Cases.	Percentage of Total.
Melancholia of all types ..	53	592	9
Manic-depressive psychosis, including all forms of mania.	3	85	3
Schizophrenia ..	14	124	11
Paraphrenia ..	7	118	6
Neuroses and psychoneuroses, including anxiety neuroses, compulsion and obsessional neuroses and neurasthenia.	35	282	12

This conclusively proves that it is more than a mere coincidence that such a position should arise during the childhood of the patient who is admitted with some manifestation of hysteria, because in a total of 1,201 of female patients suffering from other forms of psychotic or neurotic disorders, only 112 or 9% were found to have a similar history.

The following are typical examples of the histories obtained from such patients:

CASE I.—D.P. was aged seventeen years. Her father died when she was twelve years old. During her childhood she had practically no friends and was content to remain at home with her mother to whom she was greatly attached. At the age of fifteen she obtained work at a telephone exchange, but found that she could not manage it, although continuing at it for two years when she gave it up after an emotional display in the office during which she screamed and wept. From then onwards she had "fainting turns" which rendered her incapable of doing any work, with the result that she was able to stay at home with her mother. Prior to her admission to hospital, these "turns" became cataleptic in nature and were eventually succeeded by a period of amnesia.

The mechanism here seems fairly obvious. The hysterical reactions offered a means of escape from an irksome situation, and, more important still, an opportunity to return to the maternal environment. In her case there has been an entire absence of any heterosexual interests and the attachment to, and dependence on, the mother is even more marked than it was five years ago at the time of her first admission.

CASE II.—E.M., aged twenty-five years, was apparently a normal, bright child until her father's death when she was aged ten. Two years later her mother married and the patient resented her step-father's attempts to control her. She became quarrelsome and insubordinate, and at the age of thirteen she ran away from home to live with her married sister. After this she drifted from one domestic situation to another until her marriage at twenty-three. Her married life had been unhappy, the husband was lacking in sympathy and drank to excess, and this habit led to frequent arguments, which she apparently started. Six months before coming to hospital, after a disagreement with her husband because she wanted to go out and he did not, she became dyspnoic and complained of "suffocating feelings" and palpitations, and was frequently emotional. This condition persisted in spite of treatment.

In this instance the origin lay in childhood with the change in temperament caused by her

antagonism to the man who had usurped her father's place. The precipitating factor, no doubt, was the unhappy domestic situation, but the seeds of the trouble were sown before puberty.

CASE III.—I.S., aged sixteen years, from the age of thirteen had suffered from recurrent attacks of vomiting and had been under treatment on several occasions with only temporary benefit. It was found that her father had died during her infancy and that her step-father had been having illicit relations with her from the time when she was only twelve. He was prosecuted for this later.

Here the step-father failed to act as a father substitute, but instead came to represent something repulsive and terrifying. She ran away from home to escape his unwelcome attentions, but was brought back by the police at his request, so we may assume that she was an unwilling victim. The vomiting may be regarded as a physical manifestation of a psychic repugnance and disgust.

CASE IV.—E.M.D. was aged twenty-one years. Her father deserted the mother when the patient was only eight and took the children with him, eventually putting them in a State home. The mother finally found where they were and took them away. When the patient was fourteen she started work in a factory and remained at this until her marriage at twenty-one. She had been friendly with a youth of her own age who became very abusive and threatening towards her, and would wait outside the factory for her on pay day and take her money. She became very frightened of him and really married to escape his attentions, her husband being twelve years older than herself. As her former suitor persisted in his demands for money she became very emotional, had fits of screaming and developed an amnesia for a period of three weeks. From the time of her marriage she repulsed her husband and resisted his attempts to be affectionate towards her. While in hospital she said that her husband was dead and had a frenzied period of apparent fear, calling out "I didn't do it".

This patient sought a man considerably older than herself to take her father's place and to protect her from an unpleasant situation. When he failed in this respect, he precipitated an acute hysterical episode in which there was an obvious repressed wish that he might die, leaving her free from a position which showed evidence of becoming as undesirable as the one from which she was attempting to escape.

CASE V.—I.H. was twenty-one years of age. Her father died when she was aged three and her mother remarried nine years later. Her stepfather was unkind to the mother, ill-treated her, and eventually deserted her. There were two boys by this marriage. The patient first developed a functional condition when she was employed at box making. She disliked the work intensely and developed choreiform movements which prevented her from continuing at this. Since then she has remained at home. At sixteen she had a pregnancy with a subsequent miscarriage. Her home life is very unhappy, her step brothers are cruel and abusive, and frequently refer to this unfortunate incident in her past life. For three months before admission to hospital she had been troubled by persistent vomiting.

Here again the trouble commenced as soon as the patient came up against a situation to which she could not adjust herself at the age of fifteen. The chorea offered her an excuse for her return to the mother's care and she managed to carry on fairly well after this, especially as the unwelcome step-father left the home, until her step brothers grew up and began to treat her badly, when she had

recourse to another hysterical manifestation as a means of escape from her difficulties.

There are many similar cases amongst the histories of patients admitted to Broughton Hall, but the above will serve to illustrate the importance of the environmental factor, and in addition the mechanism resulting in the development of hysteria is fairly plain in each.

In considering the aetiology of hysteria we must attempt to separate the conditions which predispose from those which precipitate. It is not suggested that the failure of the father to assist in the passage of the child through the dangerous period of puberty is the cause of the trouble, but rather that it is one of the most, if not the most, important predisposing factors. It is not unreasonable to conclude that because of this the child is unprepared for eventualities; unable to cope with adversity when it comes; and instead of facing her difficulties squarely or sublimating them, she regresses and avoids her responsibilities by some form of conversion hysteria often associated with a complete lack of initiative and entire dependence on the mother.

As for the actual precipitating factors as suggested by a history of the case, these vary within certain limits. In Table III are set out the assigned causes as given by the patients themselves.

TABLE III.

Suggested Cause.	Number of Cases.	Percentage of Total.
Domestic worry, including marital, parental and other home environmental causes.	43	23
Work either unsuitable or irksome or in unpleasant surroundings.	37	20
Ill health, shock or injury	27	13
Mother's death or illness	17	9
Worry about financial or similar troubles	11	6
Irregular life	11	6
Pregnancy	9	5
Illness of relatives	5	3
Love affair	5	3
Father's death	2	1
Menarche 1; menopause 1	2	1
No known cause	20	10
Total	189	100

This reveals that the three commonest causes cited as responsible for the actual onset of symptoms are domestic worry, work, and ill-health in that order. Under domestic worry are included unhappy marriages, strict or unsympathetic parents, difficult children and disagreements with other members of the family. Here again an environmental factor is in evidence and it is present to a less extent in the second cause on the list, namely work. This may be distasteful for various reasons, not uncommonly because the surroundings are unpleasant or the fellow employees intolerable. The third most frequent cause is the ill-health of the patient herself, which again serves to demonstrate the lack of adaptability of the people of adverse circumstances. The death of the mother comes next as a precipitating factor in 9% of the total, but that of the father caused hardly a

ripple in the stream of consciousness, for in only 1% of the cases was this thought to be responsible for the illness.

The inability of these patients to withstand the onslaughts of life is also shown in the other assigned causes which in the normal person can be dealt with satisfactorily. These include pregnancy, financial troubles, illness of relatives, unfortunate love affairs and the leading of an irregular life, totalling 23% of the cases.

Investigation of the precipitating conditions in the psychoses produced a somewhat different result, for Strecker⁽⁶⁾ found that "cruelty, poverty, illness, death of relatives, and unhappy love affairs were the most frequent factors". Even here environment plays a part, although not as great a one as it does in the case of hysteria. The conclusions which can be drawn from the information which has been collected are that environment is the dominating factor in determining the development of hysteria and that in 75% of the cases it is the sole predisposing cause which can be found. Further, in 23% of these it is also given as a precipitating cause. The environment which is referred to is, of course, that of the home. Other factors seem to be negligible compared to this. Although some other form of psychic trauma may be advanced as the precipitating influence, it has been found that the actual origin lies much further back in life. Whether we accept the psycho-analytical explanation for this result of the loss of the paternal element in the child's sexual life, or adopt the simpler suggestion that it is due to the absence of the father's controlling hand, the fact still remains that this situation is of too common occurrence to be merely accidental and unrelated to the condition which develops.

The psycho-neurotic seeds are sown before puberty, although the harvest may not be reaped until adult life is reached.

Various writers have discussed the aetiology of hysteria, but the majority seek only the actual cause of the present manifestations, and pay no attention to those factors which predispose to it, although admitting that there is a neuropathic constitution which reacts adversely to various mental stresses. Stoddart⁽⁷⁾ suggests as aetiological factors, superstition and religious excitement, fright or shock, traumatism and an aberrant sexual instinct, but does not explain why certain people should react so markedly to these, while normal individuals are not affected by them. Babinski⁽⁸⁾ goes further and states definitely that "predisposition, personal or hereditary antecedents, the nature of the individual and the emotional constitution appear to be of secondary importance". This is surely a sweeping statement to make, especially as he offers nothing in return but suggestion and traumatism, two influences which cannot be said to have played more than a very minor part in the cases of our series.

No lasting good can be hoped for in any mental or physical disorder unless the condition is attacked

at its source. It is futile to treat symptoms alone and neglect the disease itself, and that is exactly what is too often done in hysteria. Therapeutic measures may ameliorate or cure the present condition, but still leave the underlying neuropathic constitution untouched. Recurrences are only too frequent, and the manifestations of hysteria may be protean in the same individual.

It is unfortunately difficult, almost impossible, for the psychiatrist to remedy entirely the effect of a faulty environment, particularly as the damage may have been done in early life, but something can be done by explaining the position to the patient and encouraging her to make a better adjustment to her troubles.

The greater growth of the study of mental hygiene, which devotes considerable attention to childhood and environment, may later produce results by correcting a faulty situation, or advising the parents concerning the correct attitude to be adopted towards the malleable and impressionable child. In this, appears to lie the only hope of the ultimate salvation of the unfortunate individual who is otherwise doomed to a life of dependence, maladjustment and psycho-neurotic aimlessness.

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- (5) Sigmund Freud: "Introductory Lectures in Psycho-Analysis."
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FRACTURE OF THE CLAVICLE.

By H. R. SCRIVENER, M.B., Ch.M. (Sydney),
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THE clavicle is very often the seat of fracture, and the clinician is apt to treat it with contempt rather than with a method based on physical and anatomical considerations. In my own experience I have seen a variety of methods based on the principle of immobilization of the superior extremity, with defective means of maintaining the fragments in position with a pad, bandages and adhesive tape.

These methods fail to some degree in particular fractures, in which the fragments are separated, and the various methods of immobilization with bandages should be looked on as a temporary or first aid measure, often a painful experience to the patient, an obscuring process to the clinician, and an immediate step toward loss of function.

The first consideration is an understanding of the physical function of the clavicle, namely, that of a prop or strut, designed to maintain a constant distance between the bony components of the superior extremity and the skeletal framework of the thorax or trunk. In other words, it is comparable to a

curved beam which is subjected to forces of compression and tension; of these the former is the more important.

It is severe compression that leads to a deviation of stresses with the resultant collapse or fracture. The distortion of the bony fragments is in accordance with the pull of the muscles attached in relation to the site of fracture and those binding the superior extremity to the trunk.

In general, the distortion of the medial fragment is upward and backward, and that of the lateral fragment downward, forward and medialward. The resulting overlap of the bony fragments is produced by the gravitation of the superior extremity and the medialward pull of the infrascapular, thoraco-humeral and thoraco-acromial muscles (see Figure I).

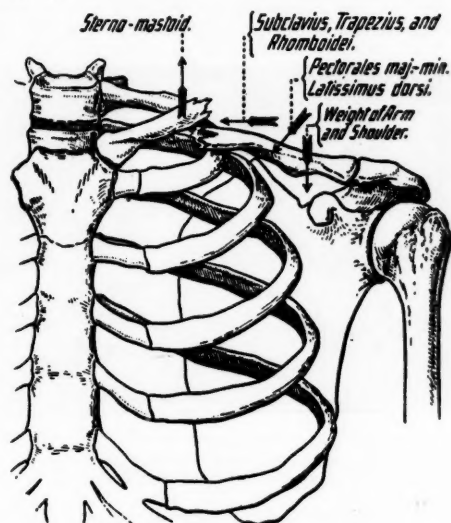


FIGURE I.

Showing displacement of the middle of the clavicle (reproduced from Deaver's "Surgical Anatomy").

The correction of this distortion requires tension to be applied in line with the longitudinal axis of the clavicle; this may be obtained by lateral traction applied about the shoulder joint, with a backward and upward pull, the reverse of the forces as shown in Figure I.

It is difficult to apply and maintain satisfactorily such a process, without the loss of function of the superior extremity being temporarily complete. However, we can put the clavicle in tension by pushing the shoulder joint upward and backward, and at the same time supporting the weight of the superior extremity and resisting the medial pull of the thoraco-acromial, thoraco-humeral and infrascapular muscles.

This is obtained by a suitable pad placed in the axilla, with the adduction of the arm to the side of the trunk, and the fixation of the flexed forearm to the front of the thorax. This is the usual method adopted and should be only temporary, since it tends to roll the shoulder forward, permits slipping

and overlapping to recur, does not produce sufficient upward push to prevent gravitation or resist the medial pull of the muscles binding the shoulder joint to the trunk.

Success in reduction depends on the type of pad in the axilla, which must be of constant dimensions. This pad must be capable of any adjustable elevation and of easy access. It should be possible to maintain it in any desired position, with the minimum impairment to the function of the superior extremity.

The usual pad of cotton wool, towel, sheeting *et cetera*, is of inconsistent dimensions and will become compressed to less than half its original size. Again, once it is in position, with bandage and strapping, adjustable elevation is not provided, except by the undoing of the strapping, which the patient rarely appreciates. The fractured clavicle that remains in position if there is separation of the fragments, has yet to be seen.

Experience with this type of fracture in hospital and private practice demonstrates the need of improved methods that will provide the necessary physical forces, preserve function and restore anatomical contour.

In this connexion I am indebted to the work of Lorenz Böhler, "Treatment of Fractures", in which he sets out the dimensions for making a unique type of splint for treatment of fracture of the clavicle. I made and used this splint and found it fulfilled the conditions necessary as stated above.

The following description of the splint will assist those who are not acquainted with Böhler's work to make it and to have it ready for use.

It consists of one wooden piece 30 by 15 by 5 centimetres (approximately 12 by 6 by 2 inches) in size, which is tapered at the upper end to form a rounded Gothic arch; another wooden piece 40 by 5 by 1.5 centimetres (approximately 16 by 2 by $\frac{5}{8}$ inches) which is fitted in and attached at right angles to the lower end of the former piece and which is used as a rest for the forearm.

The splint is interchangeable from right to left with little alteration, and is fastened to the patient's trunk with two iron ribbons and four straps or four webbing straps of suitable lengths to permit adjustment. A metal clip 2.5 by 1.25 centimetres (one by half an inch) long is fastened diagonally at the bottom to secure the elevating strap. The splint is easily applied and should be well padded before being used (see accompanying figures).

An easy way to make this splint is to buy three feet of dressed redwood 6 by $\frac{5}{8}$ inches and another piece 16 by 2 by $\frac{5}{8}$ inches.

Cut the three-foot length into twelve-inch lengths, place them together on their six-inch face, so that the middle piece stands up two inches long at one end and short at the other end. Screw together with six $1\frac{1}{2}$ by 8 brass screws, counter sunk; slip the 16 by 2 by $\frac{5}{8}$ inch piece in the slot left at the bottom so that it projects 10 inches to the front. Fix this with three or four $1\frac{1}{2}$ by 8 screws.

Purchase a sulky shaft clip $1\frac{1}{2}$ inches long and fasten this diagonally on the lateral aspect at the bottom front corner. The clip is all that need be changed to alter the splint from a right to left side.

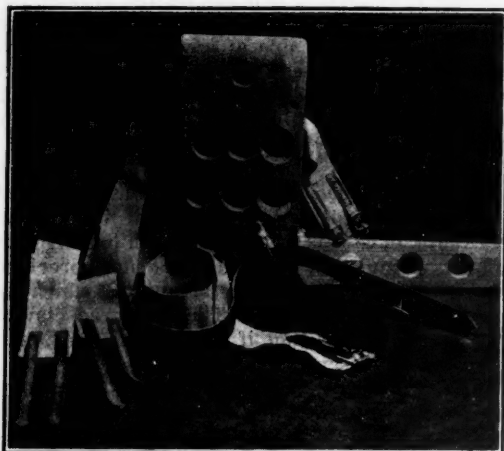


FIGURE II.

Showing lateral aspect of splint and straps (after Böhler).

Rasp the top to form a Gothic arch. The cost of this wood and screws is about two shillings.

The webbing straps are obtained from a saddler; they consist of woollen girth material 2 or $2\frac{1}{2}$ inches wide, the lower "number 1" strap ranges from 36 to 42 inches in length, and "number 2" from 40 to 48 inches on the average.

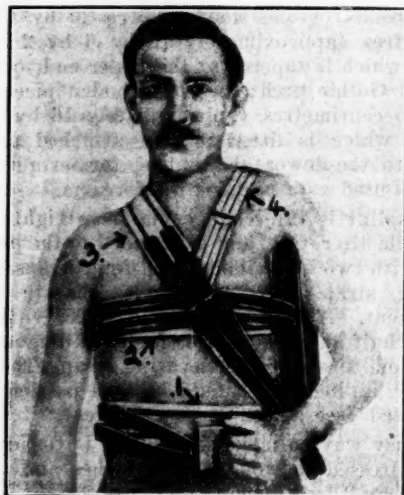


FIGURE III.

Showing apparatus applied. 1 = body strap, 2 = body strap, 3 = elevating strap, 4 = pad retaining strap (after Böhler).

Fasten "number 1" strap to the bottom inside face with four screws (1 inch by 6 cup head washer) and "number 2" strap about 4 inches from the top in the same manner. "Number 3" strap is made up

of webbing 30 to 36 inches and strap 20 to 24 or 60 inches in all for an adult. The "number 4" strap is half an ordinary non-elastic brace removed from the lugs, and a loop formed at the back and large enough to slip over strap "number 2". The total cost is about ten shillings.

The method of reduction of the fracture and the fixing of the splint is as follows:

1. Thoroughly cleanse the skin over the site of the fracture with ether.
2. Inject ten to twenty cubic centimetres of a 2% solution of "Novocain" around the site of the lesion with a fine needle, making only one puncture; wait five minutes before attempting reduction; this relieves pain at once and facilitates undressing, and allows time to prepare the padding of the splint.
3. With the patient seated, place the opposite closed fist of the operator to the side of the lesion, in the patient's axilla, that is, left fist for right

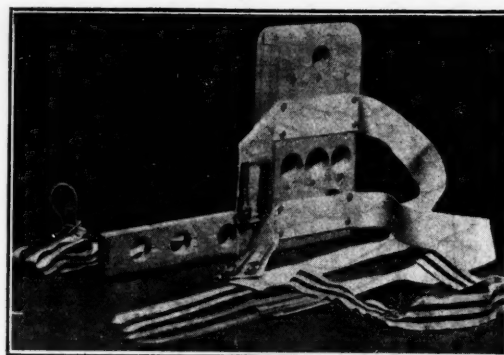


FIGURE IV.

Showing medial aspect of splint and method of attaching straps (after Böhler, with modification).

clavicle and right fist for left clavicle; with your other hand flex the patient's forearm to a right angle and press the elbow joint forward and medialward. The patient assists with his other hand to support this position, whilst the operator ascertains if reduction is completed and then slips the splint into position, replacing his closed fist.

4. Fasten the webbing belts numbers 1 and 2 around the patient's waist and thorax, then apply a pad over the normal shoulder and fasten the number 3 webbing support over this pad, taking care to pass the strap end below the bottom of the splint and through the metal clip, upward and medially, to engage the buckle in front of the chest. Draw up on this strap until the elevation of the shoulder is sufficient to reduce completely any remaining overlap of the bony fragments. Care should be taken in this procedure not to exert undue pressure in the axilla.

5. Look to the position of the fragments and maintain the position of the medial fragment by applying a small rubber sponge pad under the brace-like strap number 4, in order to control the upward pull of the sterno-mastoid muscle. The operation is now completed. An X ray examination may now

be made and any adjustment is easily made without recourse to the resetting up of the whole apparatus.

The patient is to be cautioned to remain quiet for at least forty-eight hours, either in the recumbent or sitting posture, and from this time on light movements of the forearm and arm may be allowed till the end of the first week, when almost any movement may be indulged in with impunity. The splint is left on for from three to four weeks. Should the patient feel any pressure on the vessels or nerves of the axilla, he need only raise the arm and forearm slightly or rest the hand on the horizontal portion of the splint, which is provided for this purpose (see Diagram III).

The apparatus is very suitable for dislocations of the clavicle also.

The accompanying diagrams should serve to make clear the above matter, and the actual apparatus as used and applied.

In conclusion, the advantages of this splint over other methods are its permanency, ease of application, simplicity of after-care management, and preservation of function. Its use considerably lessens the duration of the period of invalidism and gives added comfort to the patient.

With experience of these advantages I considered its more general adaptation to this class of fracture was deserving of universal use.

Reports of Cases.

FAMILIAL POLYPOSIS OF COLON WITH SUPERVENTION OF CARCINOMA.

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Clinical History.

On April 23, 1932, I was consulted by G.R.T., a male, aged twenty-eight years. He complained of pain below the navel—"it seemed to be wind"—for the previous eighteen months; the pain was worse during the last three weeks. Everything he ate turned to gas. He had six or seven stools per day. He had passed a lot of blood "with the piles". During the last fortnight he had had pain after every motion. Pain was continuous and situated in the centre of the abdomen, below the navel. It used to occur in spasms. The patient has been the same weight for eight years.

Examination revealed a thin man, who looked pale and ill and who appeared to be in pain. The abdomen was soft and moved freely. Nothing abnormal was to be palpated. *Per rectum* a soft swelling was to be felt high in the rectum, suggestive of a polypus.

On April 24 he was admitted to the Royal Prince Alfred Hospital. A barium enema was revealed by X ray examination to be blocked in the sigmoid colon. Whilst awaiting operation he had many attacks of abdominal pain and diarrhoea. On May 3 the pain was becoming urgent, and under local anaesthesia a right lumbar colostomy was performed. The caecum was in the high position and the peritoneal cavity was opened in performing this operation. As there was available no rubber tube large enough to fit the big Paul's tube, I had to use a smaller size of glass tube.

The mucous membrane of the bowel bulged into the tube and acted like a cork. The bowel continued to act *per rectum*. On the morning of May 8 his condition was reported to me to have been "better than since his admission". I had run some water into the colon on the previous day by means of a catheter passed down the Paul's tube.

At midnight on May 8 I was informed by telephone that the patient had had severe pain. At 4 a.m. on May 9 I was again called by telephone and informed that his condition was much worse. On arrival at hospital half an hour later, I found the patient suffering from severe "peritoneal shock". He then told me that he had had a "terrible pain" in the penis. He refused operative interference till the evening of May 10, when he cried out for operation. In the meantime dulness had progressively increased upwards from the pelvis. Under morphine and local anaesthesia the abdomen was opened in the mid-line below the umbilicus, and great quantities of fluid and pus with an offensive urinous odour were evacuated with a suction apparatus from the peritoneal cavity. Four intramuscular injections of gas gangrene antiserum were given (May 9, 10 and 11); 10% solution of glucose was also given intravenously with a unit of insulin intramuscularly for each three grammes of glucose on May 9, 20 and 22. The colostomy commenced to work and for some days his condition improved. He vomited dark offensive material for some days, but this ceased. A Keith's tube had been placed right to the floor of the pelvis at operation, and inside this was put a small tube connected to a Bunsen pump. The pump siphoned much pus. *Bacillus coli communis* was grown on culture. It was noted at operation that as soon as the peritoneum was picked up the patient again complained of pain in the penis.

All symptoms of peritonitis passed off, but the patient gradually became weak and died on May 22, really of inanition.

Post Mortem Findings.

Post mortem examination was performed by Dr. Davies. He found that the omentum covered the anterior aspect of the small intestines and was adherent to them, but acute inflammation was not present in this region. On separating the omentum from the intestine and separating the coils of intestine from each other, a considerable quantity of pus was found in the general peritoneal cavity. On the right side a large subphrenic abscess was present.

In the large intestine multiple polypi were present. These commenced about ten centimetres (four inches) from the ileo-caecal valve and were numerous in the proximal half of the transverse colon. Just below the splenic flexure more polypi occurred. In the sigmoid colon there was a large carcinomatous ulcer, which had perforated, causing general peritonitis. In the sigmoid colon there were some large polypi, about 2.5 centimetres (one inch) in diameter. One of these appeared to have become indurated and it was sessile, while the remainder were pedunculated.

Family History.

The patient's father died at the age of sixty-seven, of heart failure. He had a stroke eight years prior to death. The mother (E.T.) was operated on by me six years and nine months ago for acute obstruction due to carcinoma of the sigmoid. I subsequently removed a large part of the colon and the specimen is preserved at the Pathology Department of the University. It is a beautiful example of multiple polyposis, with two distinct cancers. A third cancer developed right in the junction line and was excised. This patient is alive and well. Her case is reported in detail in THE MEDICAL JOURNAL OF AUSTRALIA.⁽¹⁾

The patient had five brothers. One, W.T., died at the age of thirty-seven in Sydney Hospital. The operation records show that he had a carcinoma of the transverse colon near the splenic flexure. The microscopic examination showed this to be an adeno-carcinoma. No *post mortem* examination was done. The second brother is being treated for colitis; his age is forty-seven. The third brother, aged thirty-seven, is being treated for "stomach trouble and piles". The fourth brother, aged thirty-five, has "piles". The fifth brother, aged forty-eight, is "well". Two babies died. One sister is well; she has no children.

Comment.

This family history appeared to be worthy of record. I am indebted to Professor Dew for the loan of reprints of the literature. Kennedy and Weber mention the familial tendency in the *American Journal of Diseases of Children*,⁽²⁾ but there does not appear to be such a good example of a family with multiple polypi of the colon and a distinct tendency to form carcinomata. In the family here recorded the mother and two sons certainly had carcinoma of the colon. My patient's colon was to all intents and purposes a replica of his mother's. The polypi were, of course, not so advanced in development, nor were there so many. It is a pity that there was no *post mortem* examination in the case of W.T. It seems a fair conjecture to say that the second brother has polypi of the colon. Brothers three and four must also be suspect.

With regard to the present patient, G.R.T., I confess that I had a haunting fear that I had been impressed too much by the family history and possibly had failed to diagnose an ordinary case of appendicitis occurring in the subject of colonic disease. The pain in the penis is not to be easily explained. The only reason I can offer is that the growth was lying on the bladder and caused some irritation of this organ, but why did the pain recur when I touched the parietal peritoneum while opening the abdomen?

I shall in future refuse all but the largest size of Paul's tube for colostomy, even if the faeces have to drain into the dressing.

The value of the old fashioned Keith's tube was illustrated in this patient's illness. There seems to be no doubt that the toxæmia of peritonitis had been overcome. It is remarkable that he lived so long. For this, I think, the serum and glucose must be blamed.

Acknowledgement.

I have to thank the house surgeon, Dr. McGarrity, for notes and for his untiring efforts to save a patient whose condition was hopeless.

References.

⁽¹⁾ J. Colvin Storey: "Diseases of the Colon: The Surgical Aspect", *THE MEDICAL JOURNAL OF AUSTRALIA*, June 25, 1927, page 917.

⁽²⁾ Roger L. J. Kennedy and Harry M. Weber: "Polyposis of the Colon in Children", *American Journal of Diseases of Children*, July, 1931, page 69.

Reviews.

MENDEL.

THE rapid spread of knowledge of the work of Gregor Mendel, first published in 1865 and rediscovered in 1900, has made an adequate biography of its author imperatively necessary. The task of providing this volume has been enthusiastically and most successfully undertaken by Herr Hugo Iltis, a teacher of natural science at Brünn, the town in which Mendel's experiments were carried out.¹ The biographer was faced with great difficulties, as few of Mendel's papers had been preserved, and as, owing to the failure of his contemporaries to recognize his greatness, the memory of him had faded considerably since his death in 1884. However, with exemplary patience and industry Herr Iltis gradually collected a mass of information from Mendel's relatives and surviving contemporaries and has made such excellent use of his material that he has produced a most vivid and arresting picture of the man and his work.

Johann Mendel came from peasant stock, and from his parents he inherited his love of Nature, his dogged determination and his sturdy common sense. His ability was recognized by his teachers and, partly by the financial sacrifice of his sister (a sacrifice which in after years he much more than repaid), he received a good education.

But after he left school the great difficulty of earning enough to keep himself alive hindered his attempts to increase his knowledge. At the age of twenty-one, however, he was received into the Augustinian Monastery of Saint Thomas at Brünn. It seems that the prospect of freedom from financial cares, coupled with opportunities for study, rather than strong religious sentiments, impelled him to this step. Throughout his life he kept his science and his religion in separate watertight compartments and turned a blind eye to the *Index Expurgatorius*. Soon after taking his vows, Mendel, now Pater Gregor, was appointed a "supply" teacher at the Brünn High School. In a short time he was foolishly persuaded to attempt the very difficult examination for a school teacher's certificate, and naturally failed. However, he was sent by his abbot for a period at the University of Vienna, where he acquitted himself well in scientific and mathematical studies. After this he again attempted and for some inexplicable reason again failed to obtain his teacher's certificate. He did not make a third attempt and remained a "supply" to the end of his teaching career many years later.

Herr Iltis gives a clear account of Mendel's experiments with peas and other plants and with bees. He describes the publication of the now famous theory. He traces the evolution of scientific thought on problems of heredity up to Mendel's time, and shows that the advance made by him was too great to be grasped by his contemporaries. He then shows how the development of science led logically to work by de Vries, Correns and Tschermak on the same lines as Mendel's and to their almost simultaneous discovery in 1900 of their great predecessor. We are glad to think that Mendel was not daunted by the failure of others to appreciate his work. Shortly before he died he remarked to a friend: "My time will come."

Mendel's association with the famous botanist Nägeli was unfortunate, as it led to Mendel's experimenting with hawk-weed, a plant whose behaviour, for reasons now well known, merely bewildered him. We also must deplore that fate denied Darwin a knowledge of Mendel's work.

Mendel's studies in meteorology display his usual exactness of method and his power of clear and persistent thought. A good example of this is seen in his delightful account of a tornado, with an explanation of its origin, an explanation which was given also by Wegener in 1921, apparently without knowledge of Mendel's. Much interest lies also in the description of Mendel's work as abbot and his prolonged and unhappy dispute with the State on the subject of the taxation of the monasteries.

The translators have followed the irritating practice of giving in German the names of scientific papers mentioned in the text.

Herr Iltis has written an excellent life of a great scientist, a high dignitary of his church, and a most lovable, kindly and admirable man.

Notes on Books, Current Journals and New Appliances.

THE AUSTRALIAN AND NEW ZEALAND JOURNAL OF SURGERY.

THE October, 1932, issue of *The Australian and New Zealand Journal of Surgery* has been published. It contains some important contributions. Balcombe Quick writes on acute pancreatitis, M. Mushin on urinary diastase in acute pancreatitis, and Ewen Downie on glucose tolerance in patients recovered from pancreatitis. T. a'B. Travers has an important article on retinal correspondence, and Basil Kilvington describes in detail the method of treating fractures of the neck of the femur with a fibular graft. The section on surgical technique will be found useful by general practitioners. Charles Gale describes fracture extension systems; his illustrations are useful and his instructions could be followed with ease by anyone not well acquainted with this method of treatment. Other articles deal with local analgesia in urinary tract surgery, continuous intravenous therapy and transfusion of blood by the Jubé syringe.

¹ "Life of Mendel", by Hugo Iltis. Translated by Eden and Cedar Paul; 1932. London: George Allen and Unwin, Limited. Demy 8vo., pp. 294, with 10 illustrations and 12 plates. Price: 8s. 6d. net.

The Medical Journal of Australia

SATURDAY, NOVEMBER 26, 1932.

All articles submitted for publication in this journal should be typed with double or treble spacing. Carbon copies should not be sent. Authors are requested to avoid the use of abbreviations and not to underline either words or phrases.

References to articles and books should be carefully checked. In a reference the following information should be given without abbreviation: Initials of author, surname of author, full title of article, name of journal, volume, full date (month, day and year), number of the first page of the article. If a reference is made to an abstract of a paper, the name of the original journal, together with that of the journal in which the abstract has appeared, should be given with full date in each instance.

Authors who are not accustomed to preparing drawings or photographic prints for reproduction, are invited to seek the advice of the Editor.

DELINQUENCY.

THE article by Dr. J. W. Kemp Bruce on the delinquent child in this issue is an opportune contribution. It deals with a subject which is of importance not only to all students of preventive medicine, but to jurists, to social workers and ultimately to every member of the community. Dr. Kemp Bruce may be congratulated on the extent of his observations. They show that much useful work is being carried out by the Education Department of New South Wales. Particular attention is directed to the method of investigation and to the preliminary treatment adopted when a defective child is brought before the Children's Court, and also to Dr. Kemp Bruce's remarks regarding the need in many instances for change of environment and institutional treatment. His paper serves as a useful introduction to a study by Dr. Grace W. Pailthorpe on the psychology of delinquency.¹

Dr. Pailthorpe's work, which was carried out under a grant from the Medical Research Council on the recommendation of its Committee on Mental Disorders, consisted of two investigations. The first investigation dealt with one hundred female inmates

of prisons, and the second with one hundred inmates of preventive and rescue homes for girls and young women. Dr. Pailthorpe states at the outset, in discussing the psychology of criminals, that it is of paramount importance to differentiate between sociological and biological interests. In her opinion much confusion has arisen in the past from the failure to recognize that these two aspects are not identical, and she holds that for this reason work carried out in this line of research has been vitiated. Most people will admit that the sociologist naturally looks on the delinquent as a social failure and attributes to him some defect, intellectual, moral or otherwise. Dr. Pailthorpe holds that if the problem of the delinquent be approached from the standpoint of psychology as a province of biology, the criteria to be held must be those of biological life generally, in other words, success or failure of the individual life. On several occasions the investigation of the mental condition of prisoners has been advocated in these pages, and it is believed, at least by medical investigators, that the punishment should not be made to "fit the crime", but the criminal. Dr. Pailthorpe's profession of faith is that "criminals and asocial persons are not a class as such, but individuals suffering from psychological illness or defects".

Before reference is made to Dr. Pailthorpe's proposals for reform some account must be given of her findings. This must necessarily be brief. The hundred prison subjects were submitted to three separate investigations. They were examined from the point of view of general defect, from the psychopathic point of view and from that of individual adaptation. There were thus three main but overlapping groups: defective, psychopathic and adapted. The term defective in this classification is not used in its narrower legal sense of deficiency. It is used in its original sense and includes those who would be classified as subnormal in the Hamblin Smith grouping. The group is therefore subdivided into: (i) those who were defective in intelligence and (ii) those who were defective in sentiment development. A normal intelligence was found in 64% of the prison inmates, a subnormal intelligence in 21% and a defective intelligence in 15%. In the subnormal division (21%) other

¹"Studies in the Psychology of Delinquency", by Grace W. Pailthorpe, Medical Research Council of the Privy Council, "Special Report Series", Number 170, pp. 113. Price: 2s. net.

factors played an important if not a primary part, and the subnormality could be looked on as subsidiary. Thus mental conflict was present in five cases, three persons were psychotic, two were almost mentally defective, one was a "constitutional inferior", and in nine instances sentiment development was rudimentary and the homes were vicious and unsatisfactory. The finding of normal intelligence in 64% is held to confute the generally held opinion that people become criminals because they are subnormal intellectually. Dr. Pailthorpe thinks that it would be much nearer the truth to say that people become criminals through defect in sentiment development. Rudimentary sentiment development was found in 61 cases, developing sentiment in 23 and average sentiment in 16. In the 61% of cases with rudimentary sentiment the egoistic sentiment was present in varying degrees, whilst other sentiments, of patriotism, religion, familial, æstheticism and altruism, were very rudimentary or almost completely absent. The activities of the self-assertive instinct far outweighed those of the self-abasement instinct. The subjects were aware of their capacities (and over-estimated them), but not of their limitations. In the psychopathic group were 67 of the prison inmates. Of these 44 showed evidence of mental conflict, eight were psychotic, four were epileptic and eleven suffered from various psychopathic conditions. The adapted group included 39% of the total number investigated. Every one of the thirty-nine persons was deficient in sentiment capacity, 22 were deficient in intelligence, and the home conditions of 28 were vicious or unsatisfactory.

The figures obtained by Dr. Pailthorpe in her examination of one hundred inmates of preventive and rescue homes for girls and young women are equally interesting. The conditions found in the hundred cases are divided into three main groups. Pilfering was responsible for 25 cases. Sex irregularities (prostitution, promiscuity and obscene conversation) were responsible for 29, and other causes for 46. Among the other causes are asocial behaviour, 14; general subnormality of personality, 30; unsatisfactory home conditions, 24; bad companions, two. There is in this division considerable overlapping. The home conditions were

satisfactory in 50 of the hundred cases, unsatisfactory in 41 and vicious in nine. The intelligence of 48 of the hundred persons was normal, 48 were subnormal and four were mentally deficient. In 35 cases the development of sentiments was rudimentary, in 48 it was intermediate and in 17 it was normal.

Dr. Pailthorpe's proposals for a constructive policy form the most important part of her work. The Medical Research Council is perhaps more than usually emphatic in stating that Dr. Pailthorpe is alone responsible for the opinions expressed by her. There is no preface by the Medical Research Council's Committee on Mental Disorders. This is a pity. Some expression of opinion by this Committee would have been valuable. No one would gainsay Dr. Pailthorpe's statement that in dealing with this question a preventive attitude of mind is required. She believes that too much stress has been laid upon the diagnosis of mental defect with a view to transferring a mental defective from prison to another institution. In other words, too much attention has been paid to the potentially least valuable human beings. Since a criminal is not a person "who suddenly crystallizes out as a criminal", but whose asocial behaviour is traceable back to his childhood days, the earlier young delinquents are studied, in her opinion, the better. Dr. Pailthorpe would have parents educated to realize the indications or symptoms of a mentally sick child and would concentrate investigation on the potentially most valuable human beings. In her suggestions for the treatment of offenders she is logical. She suggests the following four methods: (i) Segregation, (a) permanent, (b) temporary. (ii) Permanent supervision without loss of freedom. (iii) Education. (iv) Psychotherapy. To carry out these suggestions there should, she holds, be established a central clearing station system and small laboratories. At the central clearing station all offenders would be examined physically and psychologically before treatment was allotted, and the laboratories would be for research into the value of the various methods of treatment.

Obviously, it is impossible to give more than a general indication of the lines on which Dr. Pailthorpe would reorganize the treatment of

criminals. Her arguments are worth reading and will doubtless be considered by all students of the subject. Her scheme of treatment can be accepted *in toto* only if her premise is true that criminals and asocial persons are individuals suffering from psychological illness or defects. This contention must be proved. Dr. Pailthorpe has not proved it. Her investigation of two hundred women does not prove it. A whole chapter might be written on the expression "sentiment development", and it might be pointed out that many people have none of the sentiments mentioned by Dr. Pailthorpe—patriotism, religion, aestheticism, altruism and what not—and withal are not considered to be criminal. Again, some people believe that society as at present constituted is not worthy either of respect or obedience. They rebel against constituted law and order and are called criminals. They are mentally normal, and their sentiments are abnormal only because they do not conform to those of the majority of the community who made the laws. Others, maybe, are forced into crime through circumstances over which they have no control. It is none the less necessary that the antisocial activities of these people should be checked. Dr. Pailthorpe has not obeyed her own injunction regarding the differentiation between sociological and biological interests. We agree with her that this differentiation should be made, and the differentiation being made, we think that medical practitioners are concerned with the biological side. The sociological aspect may be left to philosophers, psychologists, law makers and policemen. Admittedly both sides will overlap and become interwoven. The medical practitioner, be he psychologist, psychiatrist or preventive medicine expert (he may be all of these), must insist that people who are not responsible for their deviation from the accepted social standards be treated for their mental defects. If law makers are not prepared to look at crime wholly from the psychological point of view, they will probably agree that prevention is better than cure. If they agree thus far, they must consent that when a person is found to be so defective that he is foredoomed to asocial behaviour, he should be treated, and if treatment is not effective, should be placed in such

surroundings that asocial behaviour will not take place. To know that a person, through lack of mental control, is destined for a life of crime, and to fail to prevent him from embarking on such a career is to share in his subsequent guilt. Thus we must acknowledge that some of the crimes against society are in part crimes of society against itself. In its attempts to deal with crime let society first of all discover the mental defectives. In this connexion we would direct attention to a paper on the psychopathology of childhood, read by Professor W. S. Dawson at the recent meeting of the Australian and New Zealand Association for the Advancement of Science. (An abstract of this paper will be found in the issue of September 3, 1932, at page 315). Professor Dawson outlined the stages in the mental development of a child and pointed out that educational authorities had for years undertaken the routine physical examination of children, but had not paid adequate attention to the emotional state. Dr. Kemp-Bruce has described the type of work done by his department in the Children's Court. The next step is the training of school medical officers in psychological methods, so that the routine examination of a child may include an examination of its mental state. From this will follow the wider establishment of child guidance clinics, and in this way something definite will be done towards the prevention of crime.

Current Comment.

PROSTATECTOMY.

Of the discussions that took place at the centenary meeting of the British Medical Association one of the most interesting from the point of view of Australian surgery was that on prostatectomy. Papers were read by J. Swift Joly and Kenneth M. Walker, and these were discussed by several speakers.¹ Some of the facts disclosed and some of the statements made were so extraordinary that they cannot be allowed to pass without comment. It is not necessary to traverse the whole ground covered by the speakers, since all members of the British Medical Association in Australia receive *The British Medical Journal* and have had the opportunity of reading the papers and the discussion. Walker made a statement which might be taken as a slogan for all surgery of the prostate. He said:

¹ *The British Medical Journal*, July 30, August 6, 1932.

"A patient who has submitted to so grave a proceeding as prostatectomy has the right to expect that he shall be relieved of the discomforts that brought him to the operating table." Apparently London patients are not relieved of their discomforts. The mortality of the operation remains "in the region of 18 per cent. at general hospitals and 8 per cent. at special hospitals". This is not all. The post-operative complications which, Walker tells us, may be expected by the patient, are non-closure of the wound, persistent sinus, post-operative obstruction, adhesion between bladder wall and wound, painful micturition, frequency and calculus formation. To compare post-operative results by statistics is always liable to lead to fallacy, because there is as a rule no standard regarding selection of patients to be submitted to operation. With prostatectomy conditions are somewhat different. In bygone days the selection of patients was a haphazard affair, and a patient with damaged kidneys who was refused operation at the hands of one surgeon might be given the chance of recovery from operation by another. At the present time, however, as all medical practitioners know, the renal function of all patients is carefully investigated, or should be carefully investigated, before they are operated upon. A patient whose kidneys have apparently suffered irreparable damage may, after preliminary treatment with the indwelling catheter or by suprapubic cystotomy, manifest such improvement of renal function that operation, far from being merely justifiable, becomes desirable. If a high percentage of deaths after prostatectomy is due to the performance of operation on patients whose kidneys have not been given the opportunity of recovering their function, the sooner the surgeon concerned abandons prostatic surgery, the better for his patients and for the good name of surgery. If, therefore, surgeons are careful of the renal function of their patients, and we may take it that the surgeons in discourse at the centenary meeting are careful in this regard, then post-operative statistics may be considered.

The statements of the London speakers raise the question as to whether there is any justification for persevering with an operation, such as the Thomson-Walker operation, for non-malignant enlargement of the prostate, which results in the death of approximately one patient in twelve; and when a considerable percentage of those who recover are left with a persistent suprapubic sinus, require reoperation for such a sinus or have to undergo prolonged treatment for persistent sepsis. S. H. Harris, of Sydney, has shown beyond all doubt that with his method of prostatectomy (reformation of the prostatic urethra, control of hæmorrhage by suture and immediate closure of the bladder) such an appalling death rate as reported in London does not occur and that the post-operative complications experienced by London surgeons are conspicuous by their absence. In the Harris operation the abomination (no other word is suitable) of gauze packing of the prostatic cavity, which in London "is only necessary

in about 5% of cases", and the only less objectionable rubber bag of other operators are replaced by suture controlling all hæmorrhage. Swift Joly states:

Some operators—for example, Harris—endeavour to narrow the opening between the bladder and the prostatic cavity, and also to cover a portion of the raw area in the latter by bringing down a flap of mucous membrane from the bladder. I agree with Sir John Thomson-Walker that it is advisable to leave the opening between these two cavities as wide as possible, as by this means the best functional results are obtained.

From this statement one would conclude that Swift Joly and Thomson-Walker have no knowledge of the functional results obtainable by the Harris operation. After describing some of his attempts to "reduce the size of the raw area in the prostatic cavity", Swift Joly records his failure and adds: "The prostatic cavity always becomes infected and is unsuited for plastic operations." Von Lichtenberg in Germany and Walters in America have shown that a certain amount of infection is no bar to the performance of plastic operations on the kidney. There is no valid reason why plastic operations in similar circumstances should be not equally applicable to the prostatic cavity; the experience of Harris and of others has shown that they are applicable.

Incidentally an important sidelight was thrown at the centenary meeting on methods which apparently pass muster among London surgeons. Walker, in discussing adhesion between bladder wall and wound, said that when adhesion occurred between the bladder wall and the posterior surface of the *os pubis*, time was only lost by postponing surgical intervention. He explained that he told his patients that he could "save them many weeks of convalescence by inserting a few stitches into their wound, and for the sake of this advantage they cheerfully consent". He then dissects the bladder away, not only from the suprapubic scar, but also from the *os pubis*; and, after carefully inspecting the interior of the bladder to make sure that there is no obstruction at the outlet, he completely closes the bladder and ties a catheter into the urethra. In other words, he performs a major operation. This confession is so extraordinary that we prefer to make no further comment on it.

In fairness to the genuine sceptics as to the value of the Harris technique, and by genuine we mean those who, with an open mind, have taken some trouble to discover what it is all about, it must be pointed out that Sir Henry Newland, of Adelaide, told the surgeons assembled in London that he did not think that Harris really achieved reconstitution of the prostatic urethra. In our opinion Newland has not grasped the full significance of the control of hæmorrhage by the sutures of the Harris technique. Newland is, of course, entitled to his opinion that the urine softens the catgut sutures and that what he calls the mucosal flap, which is in reality a strong muscular flap consisting of the whole thickness of the trigonal muscle, inevitably retracts, and his opinion in regard to this point

will carry weight. At the same time clinical observation does not support his contention. We venture to suggest that with further experience of the operation, as carried out by Harris himself, and of the functional results achieved by it, he would alter his opinion.

In the face of all the evidence it is difficult to understand why London is so impervious to advances introduced from outside London. To say that London conservatism has always been the same is begging the question. Some day hide-bound conservatism must give way to obvious necessity, but it will not yield until it is forced to yield. The length of time that must elapse before the yielding process begins would not matter if it were merely a question of abstract or academic knowledge. Unfortunately, in the *interim* one in eight patients subjected to prostatectomy in special hospitals in London must die, others must be subjected to what we have described as abominations in treatment, and others again must be left with interesting relics of the purblindness of their surgeons.

RHEUMATIC FEVER AND CONTAGION.

Of recent years much has appeared in medical literature anent rheumatic fever. The British commission of some years ago shed a good deal of light on the subject by clarifying views and collating scattered items of knowledge of its pathology and aetiology, but all is not yet clear. For example, the exact aetiological relation of the micrococcus described by Poynton and Paine is not definite enough for universal acceptance, though it is not easy to realize that even this question of the exact bacteriology of the disease has not been settled even more than thirty years after these workers published their results. Even in Australia, where acute rheumatism is not common, but where rheumatic carditis is sufficiently common to be a by no means negligible factor in causing invalidity in young people, the rheumatic state is one of evergreen interest. The older physician vaunted diathesis as all-important in the production of rheumatism; the younger, with a bacteriological mind, was inclined to belittle any concept but that of external infection. Now we rather hang between. We incline towards considering both the soil and seed as of great, possibly almost equal, significance. Moreover, rheumatism is known to follow in the train of other infections. Is this relationship fortuitous or not?

This question is reopened by W. R. F. Collins in discussing the contagious factor in rheumatic fever.¹ He points out that two years ago Glover described an epidemic of tonsillitis in isolated and controlled communities, to wit, the Army and Air Force, the "peaks" of the epidemic curve of incidence being followed by corresponding peaks of rheumatic fever after an interval of two weeks. Collins then turns to his own experiences in London and details a well observed series of twenty-five children con-

valescening from rheumatic fever. The throats of these children were bacteriologically examined at regular intervals. During the period of observation an epidemic of severe naso-pharyngitis occurred, affecting thirteen of the children, eight of whom shortly afterwards suffered a relapse of their rheumatism. In no case was any organism grown from the blood, but in every case a streptococcus of the hæmolytic variety was isolated by throat swabbing. An exotoxin and also an endotoxin of this organism was found to give a definite intradermal response in every one of these rheumatic children, whereas a positive skin reaction was obtained in only 20% of control children tested. Other work of a similar kind is quoted favouring the hypothesis that hæmolytic streptococci have an important relation to rheumatic infection.

The author does not claim, of course, that a hæmolytic streptococcus is the true and only begetter of rheumatic fever, but he does maintain that the relapses referred to above were not, so to speak, "natural", and thinks they were in some fashion related to the undoubtedly epidemic outbreak of naso-pharyngeal infection. Hence his position is that rheumatic fever is not a contagious disease, even though upon occasion it may appear in epidemic form, but that more than one factor is responsible for its development. In other words, the rheumatic child may conquer his tonsillitis (assuming, unlikely though it may be in these days, that he still possesses tonsils) or his naso-pharyngitis just like his more robust fellows, but later falls a victim to a recrudescence of his older enemy. A parallel may be drawn with tuberculosis in its relation to measles or whooping cough, a subject recently discussed in these pages.

Collins goes on to speak of the "pre-rheumatic state", characterized by changed tissue reactions to the infecting organism or its products; this is, as he admits, *sub judice*. In fact, it is only attempting a pseudo-exactness of description, for the mechanism of the process is as yet unknown to us. The caviller will say: "What does it matter if we do not know or agree exactly what organism causes the disease?" But it does matter. There seems reason, and good reason, to believe that certain common (and commonly neglected) epidemics, like the almost universally recurring attacks of streptococcal naso-pharyngitis, have a sinister relationship to this serious disease, especially in its recurrent form. If we harken to the pathologist again we shall remember what repeated and continued attacks of rheumatism do to the heart and its entire structure. The subject is not by any means worked out. Not only is there a rich field for the medical explorer in the subject of rheumatism, but still commoner infective processes are constantly in our midst, little treated, little respected and little investigated. Carlyle spoke of the duty that lies nearer; perhaps this may be found in the investigation of those modest yet important disorders so picturesquely described by a former distinguished Australian clinical teacher as the "plain roast and boiled".

¹The American Journal of Diseases of Children, September, 1932.

Abstracts from Current Medical Literature.

SURGERY.

Primary Carcinoma of the Gall-Bladder.

H. J. SHELLEY AND L. I. ROSS (*Archives of Surgery*, July, 1932) have studied nineteen cases of primary carcinoma of the gall-bladder. They point out that the occurrence of gall-stones in carcinomatous gall-bladders is unquestionably greater than in non-carcinomatous gall-bladders. Further, the question arises as to whether or not the stones form after the carcinoma; in a great many cases the history of cholecystitis and cholelithiasis precedes the most remote time at which carcinoma may have originated. In fourteen of the authors' nineteen cases gall-stones were noted. In some cases only a cholecystostomy or biopsy was done, and in at least a portion of these stones may have passed unnoticed. Five patients gave a history of typical gall-stone colic; two gave a history of milder but more continuous pain in the right upper quadrant of the abdomen referred to the right shoulder; two patients had chills and fever. The local symptoms referable to the tumour were: jaundice in eight cases, pain in the right upper quadrant in eight, and a palpable tumour in nine. The only general symptom of carcinoma was loss of weight; this was noted in eight instances. The greatest loss of weight was 11.3 kilograms (twenty-five pounds). The symptoms due to invasion of the liver are the same as those of any other cancerous invasion of the liver. In two of the cases in which jaundice was present, stones were found in the common bile duct. Ascites was present in two instances. In discussing treatment the authors state that the removal of gall-bladders from patients who have a history of biliary colic or of attacks of cholecystitis, and the removal of the gall-bladder when stones are found accidentally may prove of value in the prevention of the development of carcinoma of the gall-bladder. Surgical removal of the gall-bladder offers the only hope of cure at the present time, but diagnosis is nearly always made so late that an attempt at complete removal cannot be made. Only one of the patients studied by the authors is still living. In this instance the carcinoma was not suspected during operation, but was found in the course of routine pathological examination; cholecystectomy was performed six and a half years ago for cholecystitis and cholelithiasis.

Changes in the Bile Ducts and Parietal Sacculi Following Absence of the Gall-Bladder.

FOREST W. COX (*Surgery, Gynecology and Obstetrics*, August, 1932) writes about changes in the bile ducts and parietal sacculi following absence of the gall-bladder. The villus-like folds

found in the bile ducts following cholecystectomy are not hypertrophied folds of epithelium, but the walls or lips of the dilated sacculi, or *vasa aberrantia*, sectioned through the orifice by which they communicate with the main duct. These folds do not appear in the intrahepatic ducts following cholecystectomy, as they do in the extrahepatic ducts, which can dilate easily; consequently, there seems to be no evidence that the ducts and sacculi take over the functions of the lost gall-bladder. If they did take over these functions, these changes should be noted in the entire system of ducts simultaneously. Obstruction of the bile ducts in the presence of a normally functioning gall-bladder produces these same changes, and if obstruction is superimposed on an operative or spontaneous cholecystectomy, it accentuates the changes. Severe obstruction will produce very bizarre appearances of the bile ducts, even those supported by hepatic parenchyma or dense connective tissue. Identical changes can be produced by ligation of the common bile duct of the rat, which does not possess a gall-bladder, but which possesses a system of sacculi and secondary bile ducts. There does not seem to be any epithelial activity, as regards hypertrophy or hyperplasia, in response to any physiological demand. The changes are brought about mechanically by intraductal pressure from obstruction, or from loss of the reservoir and expansile properties of the gall-bladder. Obstruction produced by carcinoma or by calculi impacted in the common bile duct and allowed to remain produces effacement of the sacculi, dilatation of the ducts and *vasa aberrantia*, and finally flattening of the epithelium from a columnar to a low cuboidal type. There do not seem to be any true mucous glands in the walls of the common bile duct from the point of entrance into the duodenal wall, up through the hepatic and intrahepatic ducts; the only structures present are parietal sacculi and *vasa aberrantia*, lined with the same type of epithelium as is found in the ducts and having the same functions. Appended to the biliary ducts are parietal sacculi and *vasa aberrantia*. These *vasa aberrantia* may take origin from a sacculus or directly from the duct itself. They may or may not anastomose with another similar structure over rather long distances. A parietal sacculus may be a simple evagination or may have secondary caecal diverticula arising from it and communicating with its lumen. This phase of intraductal pressure may play an important part in infections of the biliary tract and in the disturbance of metabolic functions of the liver if the organ is already badly diseased.

The Use of Maggots in Chronic Osteomyelitis.

JOSEPH BUCHMAN AND JOHN E. BLAIR (*Surgery, Gynecology and Obstetrics*, August, 1932) write of maggots and their use in the treatment of chronic

osteomyelitis. Zacharias and Baer are the only observers who have realized the significance and possibilities of the use of maggots and are the only ones who have made a practical application of this agent in the treatment of suppurative wounds. This method is new in principle, for here neither physical nor chemical antiseptics in the commonly known forms is attempted, but instead there is introduced what Baer calls a viable antiseptic. Following a battle in 1917, during the World War, Baer observed two soldiers who had sustained compound fractures of the femur and large flesh wounds of the abdomen and scrotum. They had been lost on the battlefield for seven days and were without water, food or medical attention. To his great surprise, their condition, save for that incidental to hunger and thirst, was remarkably good. Closer inspection revealed that their wounds, which presented pink granulations, practically no bare bone, and only a few streptococci and staphylococci, were filled with thousands of maggots. For ten years Baer thought of this experience, and finally, in 1927, he put his observations to practical use in civil surgery. Baer's experiments to show that the maggots can successfully contend with any infecting organism, save tetanus, were masterful. The meticulous technique he developed for the culture of the fly larvæ and their clinical application has been recently published, posthumously, in great detail. The authors' conclusions are studiously tempered with conservatism. On the whole, notwithstanding the great deal of work, trials and expense incidental to this method, they are of the belief that the maggot therapy is safe, efficient, and productive of good results, results at times so rapid and excellent as to overshadow all other available methods. One need but watch the daily change in the appearance of the wound, its gradual obliteration without the extensive scarring noted in other methods, and the comparative comfort of the patient, to realize that the maggots are instituting a superior process of healing. The authors feel, however, that before this treatment becomes general further study and experimentation are necessary to elucidate many problems and questions that arise, and to insure a continuous supply of maggots, a very difficult problem, upon the success of which will depend the popularity, applicability and success of the treatment.

Ileostomy in Chronic Ulcerative Colitis.

J. ARNOLD BARGEN, PHILIP W. BROWN AND FRED W. RANKIN (*Surgery, Gynecology and Obstetrics*, August, 1932) write of indications for and technique of ileostomy in chronic ulcerative colitis. Various forms of medical treatment of chronic ulcerative colitis have apparently yielded encouraging results. Crohn and Rosenberg reported favourably on irrigations with acriflavine. Burnford was enthusiastic about ionization. Haskell and

Cantarow expressed the belief that systemic treatment with parathormone and calcium is highly beneficial. These and many other methods of treatment, totally at variance in general principle, suggest a groping for specific treatment. Favourable reports have been issued on the use of some form of immunizing agent. Results from ileostomy in chronic ulcerative colitis are satisfactory, if the operation is performed for chronic complications. Ileostomy should not be performed for uncomplicated chronic ulcerative colitis unless all other measures of treatment have failed, these to include the use of vaccine and of serum. Ileostomy should be performed only with the patient's full understanding of its nature as a life-saving measure. Ileostomy for chronic ulcerative colitis should be permanent. The most satisfactory type of permanent ileostomy is the one barrel ileostomy, except in cases of stricture of the colon or when some hope for temporary ileostomy may be held out. The education of the patient concerning the care of an artificial anus is a very important factor for his happiness. No one of the operations, appendicostomy, caecostomy, or ileo-sigmoidostomy, has proved a satisfactory therapeutic procedure for patients with chronic ulcerative colitis.

Cerebro-Cranial Injuries.

S. N. BEREMS (*Western Journal of Surgery, Obstetrics and Gynecology*, August, 1932) summarizes eighty-six cases of cerebro-cranial injuries. Mental symptoms, such as loss of memory, confusion and unconsciousness, were present in nearly all cases. Shock is the most important of symptoms, although its incidence in this series was only 60%. Its presence demands urgent treatment. Of all patients 90% showed evidence of increased intracranial pressure. All patients received treatment for shock. Elevation of the foot of the bed, application of an ice cap and of external heat by means of a hot water bottle around woollen blankets were used. The pharynx must be kept clear of secretions and blood. In all severe cases a spinal puncture was made. Apart from relief of pressure thus obtained, it is most important from the medico-legal aspect. If blood is found in fluid from this puncture, the puncture is repeated daily until the fluid is clear. Sedatives were administered as required, but the author prefers chloral and bromides given *per rectum*. Ephedrine is a help in combating shock. Operation was performed only to relieve depressed fracture or the pressure caused by a middle meningeal hemorrhage. Blood was found in the fluid of 72% of the cases in which spinal puncture was carried out. The author makes the deduction that death ensued in about 50% of these cases giving gross evidence of blood. The author thinks that fractures of the base of the skull probably occur at least four times as often as fractures of the vault. In regard to the age of patients, the author states that persons above forty-

five years of age have only half the chance of recovery of young adults.

Calcium Treatment of Pain in Cancer.

R. J. BEHAN (*American Journal of Surgery*, August, 1932) records some results achieved by the administration of calcium in the treatment of patients suffering from inoperable cancer. In some cases the administration of calcium has replaced the use of narcotics. Occasionally the progress of the growth is arrested. To his early patients the author administered the chloride intravenously. Later the gluconate was similarly given. For the oral administration two grammes of calcium gluconate thrice daily are recommended. It is an advantage to combine the calcium salt with cod liver oil. Egg yolk and cream both contain a large amount of vitamin D and may be used if the patient cannot tolerate cod liver oil. Pressure pain is not easily relieved by calcium, and pain due to the action of radium may have no relief. The pain due to cancer of bone is only partially relieved by this treatment. The amount of calcium recommended is not harmful and seems to have a curative action on the cancer tissue.

Insulin in Obliterative Lesions of the Blood Vessels.

SAMUEL M. BEALE, JUNIOR (*American Journal of Surgery*, September, 1932) reports some cases of arteriosclerosis and gangrene in which insulin was given after operation. Insulin burns up some fat in the "flame of carbohydrate combustion". Insulin also antagonizes to an extent the vasoconstrictor action of the suprarenal. The author suggests that insulin in a malady associated with partial occlusion of vessels may, by aiding metabolism, stimulating nutrition and dilating certain arterioles, allow blood to flow where formerly it was stagnant or arrested. Many partially occluded vessels have fat deposits in the intima. The author claims benefits from insulin in cases of atherosclerosis, *angina pectoris*, bed sores in old people, deep and extensive leg ulcers, and chronic nephritis. All these cases form a group in which terminal blood vessels are involved, with fat occupying a prominent place in the pathology. It was Virchow who showed that fat occurs in the arterioles in sclerotic conditions. Great care must be exercised in treating *angina* with insulin, as hypoglycemia is dangerous in the presence of a weakened heart muscle.

Management of Fracture of the Mandible.

GEORGE C. HENSEL (*Surgery, Gynecology and Obstetrics*, August, 1932) describes the management of fractures of the mandible. Fracture of the mandible, though fairly frequent in the field of bone injury, is surprisingly uncommon under industrial conditions. During a period of six to seven years a survey of some 40,000 industrial accidents revealed only sixteen fractures of the jaw bones, of which six were maxillary and ten were limited to the mandible. This infrequency

suggests the cause for the lack of standard management. Failure to apply certain fundamental requirements in the treatment of fractures of this bone very often leads to an unfortunate permanent handicap. This fracture is usually the result of direct trauma. Subjective symptoms and objective evidence of injury are well defined and in discussing them the author emphasizes the need for examining X ray detail in proper projection. X ray examination should never be omitted. As fracture of the mandible is often multiple and there may be two fracture lines in the same half of the mandible or in opposite sides, both a direct antero-posterior and an oblique lateral projection, with each side down, should be taken as a matter of routine. If a fracture of the vertical ramus is suspected, an added projection for detail of this ramus should be secured. The most frequent site of fracture of the mandible is through the horizontal ramus in an area of relatively weak bone near the mental foramen. The fracture line is most often oblique. The second most frequent site is in the area opposite the third molar tooth and just anterior to the angular tuberosity. The simpler double fractures most often include both of these positions. Fractures through the angle, vertical ramus and neck of the condylar process are not so rare as text books indicate. A fracture in some portion of the vertical ramus is a frequent complication of a more obvious anterior fracture with displacement. In fractures in the last mentioned position search for such a second fracture always should be made, even in the absence of clinical suggestion. It is important because double fracture increases the likelihood of displacement. The mechanism of displacement of fragments is essentially a matter of muscle attachment and lines of unopposed force. Where complete fracture occurs through the body and the fracture line does not oppose displacement, the myelohyoid, digastric, geniohyoid, genioglossus and platysma muscles depress the anterior fragment, while in general the temporal, masseter and internal pterygoid muscles elevate the posterior fragment. Double fracture of the mandible is common. Search for a second fracture always should be made. Treatment should have as its goal a result that fulfils three requirements: bony union, proper occlusion of the teeth, and proper function of the mandible as a whole. Accurate reduction with intraoral fixation of fragments should be effected promptly. Moderately loose teeth should not be extracted; they may become firmly fixed as repair proceeds. Dental attention should be given during and after union. Severe mal-union, non-union and bone infection require operative care. Rotation of the ascending ramus complicates fractures with displacement. Union in malposition with such rotation of the ascending ramus gives rise to permanent derangement of temporo-mandibular joints and impaired function of the mandible as a whole.

British Medical Association News.

SCIENTIFIC.

A MEETING OF THE SECTION OF NEUROLOGY AND PSYCHIATRY OF THE NEW SOUTH WALES BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held on August 30, 1932, in the Robert H. Todd Assembly Hall, British Medical Association House, 135, Macquarie Street, Sydney, Dr. A. W. CAMPBELL in the chair.

Environment and Hysteria.

Dr. J. A. McGEORGE read a paper entitled: "Environment and Hysteria" (see page 655).

PROFESSOR HARVEY SUTTON said that the paper opened up wide fields for inquiry, but, like Oliver Twist, he felt like asking for more. It was a demonstration of the need of child guidance clinics, in which it had been found that the home was the workshop in which the infant personality was cast. He mentioned three cases of hysteria which he had seen while he was a resident medical officer at the Children's Hospital, Melbourne. In each of them the father was not in the picture. The first patient was a girl of twelve years, the child of a widow, with apparently a tuberculous hip joint, who returned home quite well after examination under an anæsthetic and after X ray examination; the condition was obviously an hysterical manifestation. The second patient was a boy of twelve with a widowed mother, who apparently had a septic knee joint, but no fever. Ticking the sole of the foot made him bend the otherwise immovable knee joint and he was cured. The third patient was a boy living with his aunts. He had rapid breathing—sixty to the minute—but recovered promptly after some talk about operative procedures.

Professor Harvey Sutton stated that there were one or two directions in which he would like to have particulars given. Statistics showed that the average age at marriage of brides was twenty-six years, and of bridegrooms thirty years—a difference of four years. Since a number of men married at more advanced ages, he did not think the ages of mothers and fathers given by Dr. McGeorge varied greatly from those of the general population. The number in the family might be followed up, for in the one-child family or the two-child family the maximum effect of parental influence was noted, as there could not be so much individual attention in large families. The usual age of breakdown in Dr. McGeorge's cases was in the third decade. It was interesting to note that the maximum incidence of tuberculosis in women was about thirty years, rapidly rising between fifteen and thirty years. Tuberculosis represented failure of resistance associated with malnutrition and fatigue. The examination of high school girls conducted by Dr. Pope showed that the age of sixteen or seventeen years was the commonest for a nervous breakdown associated with hysterical manifestations. He had asked Dr. Pope, in examining girls on entrance, to note if there were any signs of instability, and it was found that practically every one who broke down in two or three years' time was from the group of those noted on entrance to be unstable. He therefore thought that there was some extraordinary failure of autonomic control associated with loss of emotional control. No doubt the malnutrition found in unstable high school girls was due to a disturbance of the autonomic nervous system. This should give leads for the future to those interested in mental hygiene.

In a batch of the three most incorrigible boys he had ever come across, in each case the father was a ship's captain. In other cases noted in the Children's Court, where in over 60% of families with one parent the missing parent was the father, perhaps the mother had not had a fair chance, as she had to be wage-earner as well as mother. But the mothers of the three incorrigible boys were well off and had good homes, but the fathers were still necessary for discipline.

PROFESSOR W. S. DAWSON said he would like to join the previous speaker in congratulating Dr. McGeorge. He thought that psychological and environmental factors had

received too little attention in this section. In psychiatry they should think less of diseases and more of the subject's reaction to a particular set of circumstances, including the responsibilities which he failed to meet. His disease was his method of reacting to the situation. They were paying more attention to the impressionable and formative years of childhood, which had been termed the golden period for mental hygiene. Dr. McGeorge had rightly called attention to the fact that what was often ascribed to heredity was really due to parental example. This was a form of rationalization; they said it was all heredity and that therefore little could be done about it.

He was particularly interested in the mother and daughter situation. A great deal depended on the personality of the mother, and they all knew the advice given to a person contemplating marriage, to look at the girl's mother. The mother had a greater influence over the daughters and the father over the sons. It might be said that America was a matriarchal community; women taught boys in public schools, women social workers controlled the homes, and a certain religion, Christian Science, owed its origin to a woman.

It was very difficult to assess psychological factors, and Dr. McGeorge, in his valuable contribution, introduced the statistical method. This method was going to be the final test of psychoanalytical doctrines and in the institutes of psychoanalysis in Berlin and elsewhere an attempt was already being made to test the theories statistically. Often it was difficult to demonstrate the existence of psychological factors and to be dogmatic about them, hence the neglect of these aspects in text books. But the experienced physician learned to suspect the domestic situation in neurosis.

As Dr. McGeorge had admitted, psychological factors were often only precipitating causes. Dr. McGeorge rightly recognized that many hysterics were constitutionally inferior and ready to receive pathological suggestions. Professor Dawson could not discuss the various theories of hysteria. In many cases methods of treatment were limited to modification of the environmental factor. In the treatment of children less was achieved by direct appeal to the patients than to the parents. When it was decided that the condition was not physical, the less attention that was focused on the child the better, and the treatment should be directed to the parents. Even in dealing with hospital in-patients less was gained by mental examination and explanation of symptoms than by encouraging and exhorting the patient to interests of greater social value. Dr. McGeorge's paper showed the need of early handling of these persons. Melbourne was ahead of Sydney in having established a child guidance clinic with a psychiatrist, psychologist and social worker. Professor Dawson hoped that this line of work would be followed up.

Dr. A. W. CAMPBELL said that he thoroughly agreed with Professor Sutton and Professor Dawson that any investigation which would throw light on the conditioning of hysteria was of importance, because the difficulties which beset the subject were very great. It was said by some that everyone was a potential hysteric, but this was too wide. In some the tendency or disposition or instability or weakness was inborn, and that inborn weakness was at the root of hysteria; and hysteria might be precipitated by many factors; among these, as Dr. McGeorge had shown, the environmental factor was very important. In the study of hysteria there was a great deal more to be done, and Dr. Campbell suggested that Dr. McGeorge, in the further pursuit of his subject, should investigate the semeiology, the particular forms of hysteria, that arose from environmental factors.

It seemed that the prevention of hysteria could not be brought about by act of parliament, but was the work of the mental hygienist. However, he recalled a story of the French Army during the war, which, it was said, was the means of reducing the alarming increase in the "shell shock" casualties. The fact was that the soldier realized that if he could produce some disability he would escape further danger and would perhaps receive a pension *minus* work; he had no occasion to exercise his higher control. Then the bomb fell from headquarters in the form of an order that no soldier with hysteria was to be granted

any pension or discharge from the army; and if there were any wounded *plus* hysteria, they were to receive pensions for the wounds, but not for any hysterical association. The result was that the cases of shell shock fell accordingly.

In reply, Dr. McGeorge thanked the other speakers for their encouraging remarks. He found the figures rather surprised him when he came to work them out. Referring to Professor Sutton's remarks about family influence he found that the records of Broughton Hall showed that about 50% of cases of paraphrenia came near the middle of the family. The younger and older members had certain advantages, but the middle one was only what might be called a nuisance; he was not wanted as the younger children came along, or he remained a liability while the older ones were working. As to the marital state, what percentage remained single and what percentage, if married, were happy was a problem to work out. The discrepancies in the ages of husband and wife were greater than the average ages as quoted by Professor Harvey Sutton. In only nine cases was there a difference of four years, but in twenty cases differences of six to fifteen years occurred between husband and wife. Referring to Dr. Campbell's suggestion that he should study the different reactions in his patients to different environmental situations, he had done that also, but had not had sufficient space in his paper. The majority reacted with some form of syncopal or convulsive attack. He also found in a surprisingly large percentage of his patients some form of menstrual irregularity, sometimes dysmenorrhoea, sometimes menorrhagia, and frequently a late menarche. He also found that the intelligence quotients varied, but the figures were not available in the majority of cases. He agreed that there was scope for a great deal more work along the lines suggested.

Delinquency.

Dr. J. W. KEMP BRUCE then read a paper entitled: "The Delinquent Child" (see page 647).

PROFESSOR HARVEY SUTTON said that as medical officer of the Boy's Shelter Dr. Bruce was the right man in the right place, as he took a remarkable interest in the boys. He wished to take this opportunity of referring to a newspaper report of his remarks at the Science Congress in the discussion of Professor Dawson's paper. He was reported to have said that 60% of delinquents were deaf, but that was not correct. He did say that among about one hundred and twenty incorrigible, though not delinquent, boys evidence of deafness, usually in one ear, was present in 60%. Of delinquent boys at the Metropolitan Shelter, about 7% were found with distinct deafness—also a high figure. Of all the misunderstood children the one who was deaf in one ear was the most misunderstood. Even his mother said he could hear all right if he wanted to.

Professor Sutton said it was interesting to compare figures of 1926 with Dr. Bruce's figures. After the fourteenth birthday there was a rapid rise of delinquency in girls, but truancy was not common in girls. In the twelfth year only 4% of delinquents were girls, whereas 24% to 36% of serious charges between fifteen and sixteen years of age were made against girls. He could not help thinking that this was a secondary sex phenomenon. School was to be regarded as a great saving factor, and boys and girls should not suffer the gap between completing their education and the beginning of their occupational life; therefore school age should be extended to sixteen years. The figures showed that in 1,248 families 41.5% of parents were not alive or living together. In the defective families the father was away in 64.5% and the mother in 30.5% (both dead, 4.5%). Among all families with delinquents the father was shown to be absent in 27% and the mother in 13%. Truancy, though in itself a very harmless proceeding, was in its effect a very dangerous one, on account of contact with the push or gang. In truancy they found again parental failure, 26% of fathers and 10% of mothers being failures. There was also a marked association with poverty, 64% being very poor. A high percentage of delinquents came from poorer districts, while in residential suburbs the percentage of delinquents was low.

Taking the court itself, he thought that there was scope for social workers, and that women were required on the job, as they obtained much more accurate detail about the home life. More help was wanted at the Children's Court if they were to have better records. The return case was all-important. Many of these offences might have been committed by any one of those present as children. Perfectly normal lads, by sheer bad luck, came under the court. He asked what proportion of the "return cases" at the Children's Court passed into criminals and what proportion were deviated into a more satisfactory life.

PROFESSOR W. S. DAWSON said he would like to know from Dr. Bruce to what extent congenital syphilis had a bearing on delinquency. Congenital syphilis would act as a factor only through physical incapacity or mental subnormality. The question of trauma certainly was an interesting one. He had rather suggested to Dr. Bruce that new methods might be used in the investigation of these cases, but when seeing them one felt that unless there were definite neurological signs, with headache or other evidence of cerebral irritation, examination by encephalography was not justified and X ray examination would reveal nothing. He did not know of any *post mortem* studies. As to whether there was any actual brain injury one could only speculate. After any prolonged illness children tended to develop habits of idleness and after enjoying the privileges of the sick room might find it hard to settle down to steady work. Such children were susceptible to suggestions tending to develop delinquent behaviour, and he was inclined to think that the same applied to cases of head traumatism. It was dangerous and fatalistic to suppose that some irreparable damage had been done to the brain. He was glad to notice the stressing of the value of the social worker. Quite a number of reports on home conditions were made by the local police. What could they know about psychological situations and other useful social information? The good work done at Mittagong and other institutions was apt to fail unless there were proper after-care provisions. A proportion of these lads relapsed after they returned to the city. There was too much reliance on farm and country training, and there should be a greater variety of training and special classes to fit individuals for city life. In the question of recidivism he referred to the work of the Borstal institutions, where 20% of the inmates became adult criminals.

Dr. A. W. CAMPBELL said he was sure that they were all greatly obliged to Dr. Bruce for his well thought out and interesting paper and for the analysis of the cases passed through his hands.

In reply, Dr. Bruce thanked the Chairman and members for their kind remarks and stated that in reference to specific disease he had not had experience of very many cases. Parents objected to a blood test being made, but no doubt cases did occur.

PERMISSION having been obtained from the Council of the South Australian Branch of the British Medical Association for the establishment of a Section of Surgery of the Branch, the inaugural meeting of the Section was held at Adelaide on September 27, 1932.

The following office-bearers were appointed:

Chairman: Dr. A. M. Cudmore.

Honorary Secretary: Dr. A. Hobbs.

Members of Committee: Dr. B. Smeaton, Dr. L. Lindon.

Meetings of the Section will be held on the second Wednesdays of March, May, July, September and November. The annual subscription is five shillings.

NOMINATIONS AND ELECTIONS.

THE undermentioned has been nominated for election as a member of the New South Wales Branch of the British Medical Association:

Smalpage, Edward Henty, M.B., B.S., 1916 (Univ. Sydney), F.R.C.S. (England), 1921, 193, Macquarie Street, Sydney.

The undermentioned has been elected a member of the Victorian Branch of the British Medical Association:

Lowe, Thomas Edward, M.B., B.S., 1932 (Univ. Melbourne), Children's Hospital, Carlton, N.3.

Medical Societies.

MELBOURNE PÆDIATRIC SOCIETY.

A MEETING OF THE MELBOURNE PÆDIATRIC SOCIETY was held at the Children's Hospital, Carlton, on September 14, 1932, DR. REGINALD WEBSTER, the President, in the chair. The meeting took the form of a series of clinical demonstrations.

Polioencephalitis.

DR. LIONEL HOOD showed a baby of one year and six months which, while apparently quite well, suddenly had a convulsion on the day of admission to hospital. During the next five hours the convulsions were repeated several times. The baby was noticed to have a cough and to be feverish. He took his feedings well and had not vomited. His bowels had been opened as usual and the motions were normal.

The past history was that he had been delivered naturally at full term, weighing eight and a half pounds. For a few weeks he was breast fed entirely and then complementary feeds of "Lactogen" were given. At the time of admission he was fed on cow's milk and light baby diet. He had one convulsion at the age of eight months. The family history was irrelevant.

Examination revealed a well nourished, semiconscious child lying stiffly in bed. The heart, lungs, abdomen, throat and ear drums were all normal. There was no neck stiffness, and Kernig's sign was absent, but there was some slight general rigidity of the limbs.

The cerebro-spinal fluid was under slightly increased pressure. It contained one hundred and sixty red corpuscles and thirty small lymphocytes per cubic millimetre. There were seven hundred and twenty milligrammes of chloride per centum. No organisms were seen. During the next four days the child had many Jacksonian seizures on alternating sides of the body, gradually lessening in severity and frequency. He was markedly febrile during this time, and his head and eyes were deviated to the left side. His fundi were normal and the urine was clear.

During the next fourteen days the temperature slowly subsided and three more examinations of the cerebro-spinal fluid revealed no salient change from the first examination. An X ray examination of his skull revealed no abnormality.

After three weeks in hospital he was conscious, but showed no interest in his surroundings. He continually assumed a dorsal decubitus with the arms abducted and externally rotated and the elbows flexed to a right angle. The thighs were flexed on the trunk and the legs flexed on the thighs. He was constantly grinding his teeth and had a respiratory tic when handled. Examination now showed some spasticity and loss of power in both arms and legs, with increase of the tendon reflexes. The superficial abdominal responses were not obtainable, but the plantar reflexes were flexor. There was still no neck stiffness or Kernig's sign.

Dr. Hood said that trauma was excluded because of the rise in temperature and normal radiograph. A cerebral tumour was also excluded by the fever and normal fundi. The degree of recovery precluded a diagnosis of tuberculous meningitis. He thought the diagnosis was polioencephalitis.

DR. J. W. GRIEVE said the normal chloride content of the cerebro-spinal fluid also ruled out tuberculous meningitis as well as the degree of recovery. The condition was now practically one of decerebrate rigidity, and he agreed that polioencephalitis was the most feasible diagnosis.

Hysteria.

DR. J. W. GRIEVE showed a girl of eleven years with a history of ill-health since receiving a blow on the left side of the head with a sword eight months previously. She was knocked down, but did not lose consciousness. At first anorexia, disinclination to play and loss of weight were the outstanding features. Four months before admission to hospital she had been admitted to the Alfred Hospital, where a lumbar puncture was performed, followed by paralysis of the legs. Three months before admission she was sent to bed. At this time she was able to knit, write and read, but commenced to have difficulty in keeping her eyes open. This spasm persisted.

Her previous history was irrelevant. Both her father and grandfather were quacks, and there had been a great deal of talk at home in front of the child about maltreatment at the Alfred Hospital, to which institution abusive letters had been written.

An abstract of her history at the Alfred Hospital showed that her eyes were tightly closed so that her pupils could not be examined. Muscular wasting was marked. She could not move her legs and was not able even to change her position in bed. Sensation was normal. The cerebro-spinal fluid showed a trace of globulin, but was otherwise normal. A radiogram of the skull revealed no abnormality. The diagnosis was that the child probably had encephalitis.

On admission to the Children's Hospital there was marked functional blepharospasm. The child was curled up in bed and resented handling because of pain. The thighs and knees were flexed and there was no movement in the lower limbs. She would not sit up, and when sat up threw herself forcibly backwards, complaining bitterly of pain in her back. Movements in the upper limbs were normal. The deep reflexes were present and the plantar reflexes were flexor. Epicritic sensation was normal in all areas, but she was oblivious to a pin prick on the lower limbs to a region high up on each thigh.

Deep sensation was normal. Sphincteric control was normal.

Since admission to the hospital there had been improvement as regards contractures. She now could lie on her back with the lower limbs extended. The sensory loss was persisting, but she could move all the toes well and the ankles slightly.

Dr. Grieve considered that the clinical signs and symptoms were not compatible with those of an organic lesion and that the condition was one of hysteria.

DR. JOHN F. WILLIAMS agreed with this diagnosis. He said that early cases respond well to suggestion, but that late cases, such as this one, were very difficult problems. He thought that drastic measures, such as electricity, might cause amelioration of one symptom only to give rise to another. The child was unable to will a recovery and therefore suggestion was the treatment to be tried.

Cerebral Tumour.

Dr. Grieve then showed a female child, aged four years and eight months, who gave a history of good health until three months before admission to hospital, when she had an attack of headache, drowsiness and vomiting, apparently associated with a slight cold in the head. The history regarding the duration of this attack was rather vague.

Three weeks before admission to hospital the child became pale and drowsy and complained of headache. There was no loss of consciousness and the condition was regarded as a gastric upset. The temperature was 37.2° C. (99° F.). In the afternoon she was much better, but next morning there was a recurrence of the headache and vomiting. This recurred every morning, but she would always be better in the afternoon.

One week before admission it was observed that she had an internal strabismus on the right side. This squint persisted and the child was a little drowsy, but otherwise no abnormality had been observed. The past history and previous history were irrelevant.

Examination on admission to hospital revealed bilateral papilloedema, equal on the two sides. There was paresis of the right external rectus muscle. The remaining cranial nerves were normal. Examination revealed no other

neurological abnormality, except some doubtful hypotonia, possibly more marked on the left side. The left superficial abdominal reflex tired a little more readily than the right. The deep reflexes were present, equal and active. The gait was not quite steady, but revealed no characteristic abnormality.

Auscultation of the skull revealed a humming top type of bruit, with the maximum intensity in the region of the postero-inferior angle of the left parietal bone. Since the child's admission to hospital the papilloedema had increased and there appeared to be a little weakness of the left external rectus muscle. A radiogram of the skull revealed some separation of the cranial sutures. The Wassermann test of her blood yielded no reaction.

Although localizing signs were few and inconclusive, apparently the tumour was situated where the bruit was heard.

Dr. M. L. POWELL said that the presence of a bruit might render the prognosis slightly better than the usual six months of life associated with cerebellar tumours. Many bruits had no associated intracranial pathological changes. Others had an intracranial cause, such as arteriovenous aneurysm or aneurysm of the basilar or vertebral arteries. He thought this condition might be an arteriovenous aneurysm.

Angioblastomata might produce bruits and were usually cerebellar. Medulloblastomata might also cause bruits. With regard to treatment, decompression should be performed over the region of the bruit and further measures adopted according to what was found.

Bronchiectasis.

Dr. R. N. HOWARD showed serial films following lipiodol injection in two cases of bronchiectasis which had been treated by postural drainage. In each case there had been marked improvement clinically and the films showed a progressive diminution in the size of the cavities. The first patient was a boy of twelve years with a history of cough for the past four years. An X ray photograph, taken in April, 1929, showed typical extensive bronchiectatic changes in the right lower lobe. In addition to being given postural drainage at home, he was taken into hospital and the foot of the bed was elevated as much as possible for two hours twice each day. Although there were still definite basal signs and foul sputum, the boy had improved very much, both clinically and radiologically.

The second patient was a girl of eight years who had a right basal pneumonia and empyema following tooth extraction one year previously. Six months later she had been again admitted to hospital because of a persisting cough and sputum. Bronchoscopy revealed no foreign body, but X ray examination revealed extensive bronchiectatic change in the right lower lobe. With postural drainage distinct improvement occurred clinically and successive lipiodol pictures showed a progressive diminution in the size of the cavities.

Dr. Howard said that he showed these patients because, although there were many forms of treatment advocated in bronchiectasis, they were usually most unsatisfactory. Postural drainage as in these instances seemed to be the best method of treating the disease.

Congresses.

THE SECOND INTERNATIONAL OTO-RHINO-LARYNGOLOGICAL CONGRESS.

Dr. RICHARD FRANCIS writes that the Second International Oto-Rhino-Laryngological Congress was held at Madrid, Spain, from September 27 to 30, 1932. The venue had been chosen at the previous congress, held at Copenhagen three years previously.

Owing to the general financial depression, it was at one time considered advisable to postpone the meeting till a later date. Correspondence with the various nations, however, brought about a final decision to carry out the programme.

Over 500 specialists became financial members of the congress, but less than half of these were able to attend.

Seven scientific sessions were held, the subjects discussed being otosclerosis, atrophic rhinitis, scleroma, endoscopy, irradiation treatment of malignant disease; some sessions were devoted to miscellaneous papers on subjects of general interest. As the papers were given in many different languages members had to rely on translations on many occasions.

Regarding otosclerosis, much laboratory investigation was reported from America and Europe. The work of Dr. Maurice Sourdille, of Nantes, was especially interesting. He has been trephining the labyrinth in advanced otosclerosis for the past five years. With experience he has modified his technique. He has now evolved a practical method for treatment of this formerly hopeless condition, with an increasing percentage of success.

Atrophic rhinitis and scleroma are apparently common in Europe, while rare in America and in Australia.

In the endoscopy session good silent and talking cinematograph films illustrating technique were exhibited.

Irradiation treatment is undergoing frequent changes in methods of application. In France a new method of giving frequent large doses of deep X rays is giving good results in pharyngeal conditions.

Operations were carried out by local and visiting surgeons, but the number of onlookers prevented a view, except to the very few nearest the surgeon.

Dr. A. G. Tapia was president of the congress and Dr. A. Fumagallo the secretary. These gentlemen, with an energetic committee of local practitioners, had obviously worked untiringly over a long period prior to the commencement. This resulted in a splendidly organized function, which was most instructive and a great pleasure to the members. One example was the reception office, where a large staff of interpreters spoke all the principal languages.

All the time apart from the scientific discussions was filled by a vast entertainment programme. These included a reception and luncheon given by the President of the Spanish Republic at the palace. The President also opened the congress at the inaugural meeting.

Madrid has indeed set a high standard for future meetings.

Correspondence.

THE PRICE OF ETHER.

SIR: Let me advise "Fairplay" to use imported ether. The extra cost of about one shilling per pound is more than repaid by the quiet induction and small quantity used for maintenance of anaesthesia.

Satisfied patients will ask more often for his services, the demand for dangerous basal anaesthesia will cease, and he will have the satisfaction of having helped the Federal Customs revenue while using a standard world-famous product.

Yours, etc.,

November 15, 1932.

"STANDARD."

TONSILS AND DIPHTHERIA.

SIR: Dr. Graham Brown, in a paper in *The Journal of Laryngology*, refers to an earlier paper by him in *THE MEDICAL JOURNAL OF AUSTRALIA*, April 17, 1920. He quoted very many workers in this field, but omitted any reference to myself, and on May 1, 1920, in *THE MEDICAL JOURNAL OF AUSTRALIA*, I drew his attention to the fact that I had for twelve years, on the patients and staff of the Children's Hospital, carried out the procedure of removing tonsils to clear up carriers with unvarying success, except in cases of nasal diphtheria, where the antrum should be washed out. I believe I was the first to carry out this plan.

Yours, etc.,

W. KENT HUGHES.

22, Collins Street,
Melbourne,
Undated.

Obituary.

JOHN ROBB MUIRHEAD.

WE regret to announce the death of Dr. John Robb Muirhead, which occurred at Kirkcaldy, South Australia, on November 18, 1932.

CHARLES PERCY BARLEE CLUBBE.

WE regret to announce the death of Sir Charles Percy Barlee Clubbe, which occurred on November 20, 1932, at Sydney, New South Wales.

Books Received.

THE MEDICINAL AND POISONOUS PLANTS OF SOUTHERN AFRICA, by J. M. Watt, M.B., Ch.B., and M. G. Breyer-Brandwijk; 1932. Edinburgh: E. and S. Livingstone. Crown 4to., pp. 334, with illustrations. Price: 25s. net.

PHYLAXIS, by G. Billard, M.D.; 1931. London: Kegan Paul, Trench, Trubner and Company, Limited. Demy 8vo., pp. 89. Price: 14s. 6d. net.

Medical Appointments.

Dr. A. R. Clayton (B.M.A.), Dr. H. C. Carden (B.M.A.), Dr. F. L. Thyer (B.M.A.) and Dr. A. T. Harbison (B.M.A.) have been appointed Honorary Medical Officers to the Wallaroo Hospital, South Australia.

Dr. V. P. Johnson (B.M.A.) has been appointed Acting Medical Superintendent of the Hospital for the Insane and the Receiving House, Ballarat, Victoria, pursuant to the provisions of the *Lunacy Act* 1928.

Dr. O. Joynt (B.M.A.) has been appointed Acting Superintendent of the Hospital for the Insane, Mont Park, Victoria, pursuant to the provisions of the *Lunacy Act* 1928.

Dr. J. N. Morris (B.M.A.) has been appointed a member of the Queen's Memorial Infectious Diseases Hospital Board, Victoria.

Dr. G. H. Hewitt (B.M.A.) has been appointed Government Medical Officer at Bellingen, New South Wales.

Dr. A. L. Tostevin (B.M.A.) has been appointed Honorary Curator to the Ophthalmological Section of the Pathological Museum, Adelaide Hospital, South Australia.

Medical Appointments Vacant, etc.

FOR announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser", page xiv.

BRISBANE MATER CHILDREN'S HOSPITAL, QUEENSLAND: House Physician and House Surgeon.

DEVON PUBLIC HOSPITAL, LATROBE, TASMANIA: House Surgeon.

GYMPIE GENERAL HOSPITAL, GYMPIE, QUEENSLAND: Junior Resident Medical Officer (male).

LAUNCESTON PUBLIC HOSPITAL, LAUNCESTON, TASMANIA: Resident Medical Officer (male).

NORMANTON DISTRICT HOSPITAL, NORMANTON, QUEENSLAND: Medical Officer.

THE BRISBANE AND SOUTH COAST HOSPITALS BOARD, QUEENSLAND: Honorary Relieving Out-Patient Physician.

THE PUBLIC SERVICE BOARD, SYDNEY, NEW SOUTH WALES: Assistant Medical Officer of Health (male).

THE WOMEN'S HOSPITAL, CROWN STREET, SYDNEY, NEW SOUTH WALES: Resident Medical Officer.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, Tavistock Square, London, W.C.1.

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 135, Macquarie Street, Sydney.	Australian Natives' Association. Ashfield and District United Friendly Societies' Dispensary. Balmain United Friendly Societies' Dispensary. Friendly Society Lodges at Casino. Leichhardt and Petersham United Friendly Societies' Dispensary. Manchester Unity Medical and Dispensing Institute, Oxford Street, Sydney. North Sydney Friendly Societies' Dispensary Limited. People's Prudential Assurance Company Limited. Phoenix Mutual Provident Society.
VICTORIAN: Honorary Secretary, Medical Society Hall, East Melbourne.	All Institutes or Medical Dispensaries. Australian Prudential Association, Proprietary, Limited. Mutual National Provident Club. National Provident Association. Hospital or other appointments outside Victoria.
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane.	Brisbane Associated Friendly Societies' Medical Institute. Mount Isa Mines. Toowoomba Associated Friendly Societies' Medical Institute. Chillagoe Hospital. Members accepting LODGE appointments and those desiring to accept appointments to any COUNTRY HOSPITAL are advised, in their own interests, to submit a copy of their agreement to the Council before signing.
SOUTH AUSTRALIAN: Secretary, 207, North Terrace, Adelaide.	All Lodge Appointments in South Australia. All Contract Practice Appointments in South Australia.
WESTERN AUSTRALIAN: Honorary Secretary, 65, Saint George's Terrace, Perth.	All Contract Practice Appointments in Western Australia.
NEW ZEALAND (Wellington Division): Honorary Secretary, Wellington.	Friendly Society Lodges, Wellington, New Zealand.

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